

INSERVICE TEACHER EDUCATION PACKAGE

— For Primary School Teachers

PROGRAMME OF MASS ORIENTATION FOR SCHOOL TEACHERS

INSERVICE TEACHER EDUCATION PACKAGE

Vol I : For Primary School Teachers



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

March 1988

Chaitra 1910

P.D. 50T — PD

© National Council of Educational Research and Training, 1988

ALL RIGHTS RESERVED

- ☐ No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher.
- ☐ This book is distributed subject to the condition that it shall not, by way of trade, be lent, sold, hired out or otherwise disposed of without the publisher's consent, in any form of binding or cover other than that in which it is published.

Acc no-16552

Published at the Publication Department by O. P. Kelkar, Secretary, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi 110016, phototypeset by S. P. Electronics, New Delhi 110002 and printed at Saraswati Offset Printers, New Delhi 110028.

FOREWORD

In the context of the National Policy on Education (NPE) 1986 and the Programme of Action (POA) developed for policy implementation, the Ministry of Human Resource Development (MHRD), Government of India, have formulated the Programme of Mass Orientation for School Teachers (PMOST) to reach five lakh teachers each year during the current Five Year Plan (1986-90). The programme aims at creating awareness and developing competencies in the school teachers for policy implementation. The National Council of Educational Research and Training (NCERT) has been entrusted with the responsibility of developing various aspects of the programme and to plan its organisation. The state level nodal agencies perform a leading role in the implementation of the programme.

The PMOST has been designed to orient school teachers all over the country through a network of 10,000 teacher orientation camps each of ten days' duration. A faculty of 10,000 academic personnel is oriented in 5 day orientation courses to take up work as Course Directors and Resource Persons in teacher orientation camps. The teaching faculty for the training of resource persons who are usually the key level state functionaries and subject experts are trained by the NCERT. The NCERT has prepared Inservice Teacher Education Package (ITEP) and the training strategies with a view to realizing the programme objectives and minimising training loss from one level to another. The nodal agencies at the State/UT level adapt these by incorporating such changes as are required to meet local specific inservice needs of teachers.

The Inservice Teacher Education Package (ITEP) under the programme was developed in 1986 in the modular form. It was directed at generating awareness in the teachers about their roles. It was revised in 1987. With the recent developments in policy implementation, new thrusts and institutional infrastructures have emerged. Consequently, changes in the inservice teacher education modalities are also visualised. A gradual shift from mere sensitization of the teachers to developing specific subject competencies has been attempted in the revised package for this year.

The endeavour is to create a learning environment in keeping with the policy resolution, 'Teachers should have the freedom to innovate, to devise appropriate methods of communication and activities relevant to the needs and capabilities of and the concerns of the community'. To help teachers in this direction, the present package has been made more comprehensive by providing both the discussion and supplementary reading materials. The different volumes under the package are likely to serve as useful materials for teachers and resource faculties.

The PMOST is an innovation. It is, perhaps, the first example of its kind of a massive coverage of teachers for their inservice education with adequate material support, and designed in a systematic way. An impressive feature of the programme is the spirit of collective responsibility evinced by the NCERT and the state level functionaries in serving the teacher community, and the enthusiasm of teachers reflected in their active participation often seen in the teacher orientation camps. These trends speak of the morale generated by the programme amongst educational workers in the country.

In a programme of this size with targets for seeking participation of half a million teachers, where more than ten thousand faculty, including about a hundred members of the faculty of the NCERT, join hands in material preparation, training and evaluation, I appreciate the efforts of all my fellow workers. I am particularly grateful to Prof. A.K. Jalaluddin, Joint Director, NCERT, and Prof. A.K. Sharma, Head, Department of Teacher Education, Special Education & Extension Services (DTESEES) for their leadership in planning and monitoring of this programme. My thanks are also due to Prof. M.M. Chaudhri, Joint Director (CIET) and his colleagues for having developed the telecast support for this programme. I am also thankful to the Heads of Departments/Units/Cells of the NIE, Principals of Regional Colleges of Education (RCEs) and their academic faculty and the Field Advisers for their contribution in this programme.

Dr. B.R. Goyal and Dr. D.D. Yadav of DTESEES have been assigned work on this project on aspects as planning, monitoring, coordination, material development and such other components of the programme. Their contribution particularly, on planning the development of the package and writing of training material deserves commendation. Last but not the least, I appreciate the challenging work undertaken by the Head, Publication Department of NCERT and his colleagues for the timely publication of the material.

It is hoped that the material under the Package will be found useful by teachers in enhancing their professional development and thereby raising the quality of school education in the country.

New Delhi
12 March 1988

P. L. MALHOTRA
Director, NCERT

PREFACE

The National Policy on Education (NPE) 1986 and the subsequent document Programme of Action (POA) signify a new landmark in the educational development in India. The teacher has been paid the highest compliment. It is said that no people can rise above the level of its teachers. 'The teacher is the principal means for implementing educational programmes and of the organisation of education.'

New roles have been expected of the teachers. For example, the Policy statement, 'Child-centred and activity based process of learning should be adopted at the Primary stage', has its implications that the teacher instead of acting as a disseminator of information would act more as a mediator of learning. He would help children learn in and through their own environment; stimulate them how to learn by themselves; help them develop inquiring mind and act as a guide to identifying learning resources. The shift in emphasis from teaching to learning has quite a number of new dimensions for teachers' roles. Likewise, the concept of equality of opportunity has now been stated as 'to provide for equal opportunity to all not only in access, but also in the conditions for success', thus bringing out yet another important role for the teachers. There are many aspects wherein teachers are now to provide prestigious leadership roles in Policy implementation.

The new dimensions of teachers' role arising out of the Policy thrusts, necessitate inservice education of teachers so that the proposed reforms are understood by them and properly implemented. To sensitize teachers to their emerging roles, the Ministry of Human Resource Development (MHRD), Government of India have launched the Programme of Mass Orientation for School Teachers (PMOST) in the first instance, aiming at orienting about 5 lakh teachers annually during 1986-90. The modalities of the programme are developed by the NCERT. The NCERT has designed the programme in the form of 10-day orientation camps and by developing training materials on various aspects in modular form, supported by a series of telecasts for this programme, and suggesting training strategies to be pursued in the organisation of the programme. The orientation materials were developed as resource materials in 1986. These were revised in 1987 on the basis of a field test organized in Trichur, Kerala.

The programme of Mass Orientation for School Teachers has now been incorporated into the Centrally Sponsored Scheme of Teacher Education. Therefore, the programme objectives have been enlarged by providing for development of subject competencies in the teachers in addition to awareness components. The materials and strategies have further been reviewed, revised and updated and given the shape of

Inservice Teacher Education Package. It includes separate volumes for primary school teachers, and upper primary and secondary school teachers; guidelines for eight days of telecast for 45 minutes each day consisting of video programmes specially developed selected for this programme; guidelines for Resource Persons and Course Directors. The first two volumes are supplementary to each other. There are in all 41 modules in both the volumes. The first 18 modules and the document on National Policy on Education 1986 are common to both. The common modules pertain to policy thrusts, value oriented themes, management issues and pedagogical aspects visualised in the context of the Policy implementation. There are 11 modules specifically meant for primary school teachers and 12 modules for the teachers of upper primary and secondary levels. Separate modules are devoted to explain to the teachers the needs and problems of children and adolescents, and the implications of the new approach of continuous comprehensive evaluation for the different stages of school education. Further, the modules in subject areas are directed to providing pedagogical insights to the teachers of respective stages.

The development of the present Inservice Teacher Education Package is a collective effort of a large number of the academic faculty of NCERT and NIEPA. The interest and effort evinced by all the faculty members entrusted with the review and updating of the material deserves all praise. Likewise a lot of effort is made at the state level in the review and adaptation of the material, in the translation, editing and printing of the Package. The hope is to reach the Teacher in word and spirit and serve him/her in his/her efforts towards implementing the National Policy on Education 1986.

At the NCERT level, the Department of Teacher Education, Special Education and Extension Services is the nodal department for the PMOST. The team constituted to coordinate and monitor the programme has been actively associated with the development of the package and other materials. The zeal, hard work and ability with which Dr. B. R. Goyal, Dr. D. D. Yadav of my department have worked in giving the present shape to the Package deserves our appreciation. My other colleagues in the department also provided their support and cooperation in dealing with different aspects of the programme, whenever requested. Miss Namrata Bhaskar and Miss Savita Kaushal, Project Fellows, also deserve my appreciation and thanks for their sincere efforts in compiling data and providing other support. Our thanks are also due to Mr. K.N. Mathur, APC, and other administrative staff of the Department for the support provided by them in this programme.

A. K. SHARMA

Professor & Head

Department of Teacher Education,
Special Education and Extension Services

New Delhi

12 March 1988

CONTENTS

	<i>Pages</i>
1. C. National Policy on Education—Implications for Teachers	1
2. C. National Curriculum Framework for Elementary and Secondary Education—An Introduction	10
3. C. Equal Opportunity of Education for Deprived Groups (Scheduled Castes and Scheduled Tribes)	17
4. C. Providing Equal Opportunity of Education to Women	22
5. C. Meeting Educational Needs of Children with Learning Problems	30
6. C. Learner-Centred Approach	46
7. C. Training Pupils in Developing Inquiry Skills	56
8. C. Value-Oriented Education	64
9. C. Our National Symbols	75
10. C. Promotion of National Integration	87
11. C. Education for International Understanding and Human Rights	94
12. C. Facilitating Enrolment and Retention	99
13. C. Institutional Planning and Management	104
14. C. Community Participation for Educational Development	109
15. C. School Complex	116
16. C. Operation Blackboard	122
17. C. Improvising Teaching Aids	130
18. C. Use of Mass Media and Educational Technology in Education	135
19. P. Needs and Problems of Children	143
20. P. Continuous Comprehensive Evaluation at Primary Level	148
21. P. Population Education at Primary Level	154
22. P. Art Education at Primary Level	160
23. P. Work-Experience at Primary Level	166
24. P. Teaching of Mother Tongue (Hindi) at Primary Level	172
25. P. Teaching of Environmental Studies—I & II at Primary Level	180

26. P.	Multiple Class Teaching at Primary Level	185
27. P.	Teaching of Mathematics at Primary Level	191
28. P.	Teaching and Learning of Languages at Primary Level	220
29. P.	Health and Physical Education at Primary Level	229

ANNEXURES

I.	National Policy on Education 1986	235
II.	NCERT Faculty members associated with the development of the modules	263

National Policy on Education— Implications for Teachers

Overview

This module presents in brief, the major thrust areas of the National Policy on Education—1986 (NPE-1986) and their implications for teachers. At first, the module outlines the national concerns and urgency underlying the formulation of the Policy. As you reflect on this, you will appreciate that quality education is the only way to national development, survival and contributing to a better world order. The module then deals with salient features of the policy that need urgent implementation for better education. These features cover such aspects as the national system of education, equality of educational opportunities, national curriculum framework, child-centred education, value education, evaluation process and examination reforms, community involvement, teacher and teacher education. These salient features have direct implications for teachers. Therefore, an attempt has also been made in the module to highlight the implications of the policy for the work and continuing education of teachers.

A few discussion questions are given at the end of the module. These questions are intended to initiate discussion among the participants so as to facilitate a shared process of learning.

Objectives

After studying this module you will be able to:

- know the salient features of the National Policy on Education,
- understand the importance of the role of teachers in the implementation of the policy,
- appreciate the underlying concerns and need for formulating the policy,
- appreciate the need of and urgency about your active participation in implementing the policy.

Background

Education plays a vital role in the development of human potentials. Every country develops its system of education to meet the challenges of changing times. In our

situation the developing educational system must build upon the gains of the past and the present for a better future for our people and, indeed, of mankind.

It is possible to reach all our people with the benefits of our economic and technical developments through a well-planned and well-implemented system of education. At this point in our history, it is socio-politically imperative to take urgent steps in this direction to help them realise their growing aspirations.

Life in the coming decades is likely to bring us both challenges and opportunities. Coming generations must be well prepared to face the challenges and take advantage of the opportunities that come their way. They must develop the ability to think and apply new ideas constantly and creatively. Their actions should be guided by a strong commitment to human values and social justice. The way to achieve this is better education.

The formulation and implementation of the National Policy on Education—1986 (NPE-1986) has to be viewed and understood against this background. As a teacher engaged in helping children to shape themselves and the future of the nation, this wider perspective should always be kept in view. This will provide direction, content and meaning to your role as a teacher in the implementation of the policy.

The policy was adopted by Parliament during the Budget Session 1986. It outlines general formulations indicating the directions and thrust areas in education. During the 1986 Monsoon Session of Parliament, the Programme of Action was presented. The POA provides an indication of the nature of actions which will be needed to implement the directions of the policy.

Salient Features

NPE-1986 is formulated on the fundamental principle that “education is a unique investment in the present and the future”. This implies that education is essentially for all, that education can promote the goals of socialism, secularism and democracy enshrined in our Constitution, and that education develops manpower for different levels of economy.

National Perspective for Education

NPE provides a comprehensive national perspective for education. It envisages a continued effort required to develop a National System of Education. A National System of Education does not mean a uniform and rigid system. It allows for considerable flexibility within a broad framework. The concept of a National System of Education implies, (i) equal opportunities to all both in terms of access to education of a comparable quality and conditions of success, (ii) common education structure, (iii) a national curriculum framework, and (iv) minimum levels of learning for each stage of education.

The need to evolve a national system of education can be traced to the period of our freedom struggle when Mahatma Gandhi put forward the idea of Basic Education

or Bunyadi/Nai Talim. The Education Policy of 1968 also recommended taking steps towards a Common School System.

Education for Equality

The National Policy lays special emphasis on the removal of disparities and to equalise educational opportunities by attending to the specific needs of those who have so far been denied equality.

(i) *Education for Women's Equality*: The national educational system will play a positive role in investing women with power. Education will be used as an agent of basic change in the status of women. Women's studies will be promoted as part of various courses and educational institutions will be encouraged to take up active programmes to promote women's development.

The removal of women's illiteracy and obstacles inhibiting their access to, and retention in, elementary schools will receive top priority. This will be done by providing special support services and effective monitoring.

(ii) *Education of Scheduled Castes*: A pre-matric scholarship scheme for children of families engaged in occupations such as scavenging, flaying and tanning will be given to students from Class I upwards regardless of their family incomes. Suitable incentives have been recommended for all educationally backward sections of society, including Scheduled Caste students.

Remedial courses will be provided for SC children to improve their prospects for further education and employment. Hostel facilities will be provided. Teachers will be recruited from among SCs.

Constant planning and supervision to ensure the enrolment, retention, and successful completion of courses by SC children will be undertaken.

Other available resources such as National Rural Employment Programmes and the Rural Landless Employment Guarantee Programme will be used to make educational facilities available to SCs.

(iii) *Education of Scheduled Tribes*: Priority will be accorded to opening primary schools in tribal areas. Special instructional material will be developed for the early years of education with arrangements for switching over to the regional languages. As for SCs, so teachers will be recruited from among educated youth of STs. Facilities such as residential schools, remedial courses and incentives will be extended to large numbers to enable ST children to move upto the level of the mainstream of the country.

(iv) *Other Backward Sections and Areas*: Suitable incentives will be provided to all educationally backward sections of society, particularly in rural areas. Remote and inaccessible areas will also receive special attention.

(v) *Minorities*: Certain minority groups are educationally deprived and backward. Greater attention will be paid to the education of these groups.

(vi) *The Handicapped*: Special boarding schools will be provided at district headquarters for handicapped children. Adequate arrangements will be made to give vocational training to the disabled. The policy lays emphasis on teacher education programmes for teachers of primary classes, who deal with the special difficulties of handicapped children. The education of children with mild visual, speech and mental handicaps and the orthopaedically handicapped will be undertaken with that of other children.

Universalisation of Elementary Education

Considerable efforts have been made towards providing free and compulsory education to all children up to the age of 14 years, which is a Directive Principle of the Constitution. Even so, we are far away from achieving the goal of universal elementary education (UEE). The Policy has given priority to UEE. The emphasis will be on universal enrolment and universal retention and improvement in the quality of education.

Common Structure of Education

The Education Commission (1964-66) had recommended 10+2+3 as a common structure of education throughout the country. After the Education Policy of 1968 most States have accepted the structure. The remaining States are in the process of switching over to this structure.

While appreciating this achievement, the NPE has recommended that the first ten years of schooling comprise five years of primary, three years of upper primary and two years of secondary education. Five years of primary and three years of upper primary will together form eight years of elementary education.

National Curriculum Framework

The Policy envisages a national curriculum framework which contains a common core alongwith other components that are flexible. The basic features of the curriculum for the elementary and secondary stages are as follows:

- (i) Development of human resources for the realisation of the national goals of development.
- (ii) Broad-based general education to all learners at the primary, upper primary and secondary stages.
- (iii) A common scheme of studies for elementary (primary and upper primary) and secondary stages.
- (iv) The common core comprising the components of the history of India's freedom movement; constitutional obligations; content essential to nurture national identity; India's common cultural heritage, egalitarianism, democracy and secularism; equality of sexes; protection of the environment; removal of social barriers; observance of the small family norm; and inculcation of the scientific temper.

- (v) Defining Minimum Learning Outcomes (MLOs) for each area of learning at all stages of education.
- (vi) Provision of flexibility in the selection of content/components and learning experiences which will facilitate the attainment of a minimum level of learning outcomes.
- (vii) Child-centred and activity-based process rather than a teacher-centred approach during the transaction of the curriculum.
- (viii) Recasting the examination system and introducing continuous and comprehensive evaluation that incorporates both scholastic and non-scholastic aspects of education spread over the total span of instructional time.
- (ix) Establishment of an appropriate machinery, such as a National Testing Service (NTS) for the selection, and development of norms of comparable competence across the nation.
- (x) Applicability of the curriculum to all learners, irrespective of their modes/channels of learning in order to ensure comparability of attainment, and to facilitate horizontal and vertical mobility of the learners.
- (xi) Provision of essential facilities for the effective transaction of curriculum in all schools/non-formal learning centres.

Minimum Levels of Learning

In order to ensure a comparable standard of education, minimum levels of learning will be laid down for each area of learning at all stages of education. The minimum levels of learning will serve as a reference in the development of instructional materials, selection of suitable teaching-learning strategies and evaluating learners' progress.

Child-Centred Education

The policy has recommended that in curriculum transaction the practice of encouraging rote memorisation should be replaced by a child-centred and activity-based process of learning.

The child as an individual has his needs, interests, attitudes and abilities which must be taken into consideration while transacting the curriculum. The teacher should create a warm and encouraging learning environment in the class and act as a facilitator in the learning process of children.

Value Education

The Policy also highlights the urgent need for value education in view of the growing erosion of essential values and increasing cynicism in society. With a well-designed curriculum content and transaction, it is possible to make education a forceful tool for the cultivation of social and moral values. Education should foster universal and eternal values so as to promote the unity and integration of our people. Such value

education should help to eliminate obscurantism, religious fanaticism, violence, superstition and fatalism. Education, which inculcates universal and eternal values like honesty, truthfulness, courage, conviction, tolerance, love for justice and compassion will help in developing balanced individuals and in creating a humane society.

Evaluation Process and Examination Reforms

Improving the process of evaluation and reforming the examination system is another thrust area of the policy. Teaching the learner to assess his/her progress is an integral part of the teaching-learning process. The process of evaluation can contribute to bring about a qualitative improvement in education. For this, evaluation should be a continuous and comprehensive process incorporating both scholastic and non-scholastic aspects of education.

At the school stage, public examinations will be held at the levels of Classes X and XII. State Boards of School Education are expected to play a vital and responsive role to ensure that the assessment of students' performance is valid and reliable. The use of grades in each subject separately will replace the existing practice of assigning marks.

Provision for Facilities

A major feature of the policy is its emphasis on improving the quality of education. To provide suitable conditions for excellence in education, various strategies are envisaged. A major thrust will be provided in buildings, teachers and school facilities. Under the scheme of 'Operation Blackboard', primary schools will be provided with a minimum of physical and learning materials which will include two large rooms, toys, games materials, blackboards, maps, charts, and other learning materials. Attempts will be made to provide all the schools with adequate playground facilities. The secondary and higher secondary schools which are at present under-equipped will be suitably equipped with laboratories and libraries to facilitate effective curriculum transaction.

Community Involvement

The policy lays great emphasis on involvement of the community in the educational process. Involvement of parents, community members and voluntary agencies will foster closer links between the school and the community. This will help to reduce absenteeism and dropouts, improve the relevance of education with greater access to community resources. It will also help the better management of educational institutions.

Teacher and Teacher Education

The policy places complete trust in the teaching community. It envisages freedom for the teacher to innovate and to carry on his/her work in a manner that is relevant to the needs and capabilities of learners, and also reflects the concerns and aspirations of the community.

The policy has suggested a variety of steps to improve the status of teachers with effective teacher accountability, specifically, the following are the suggested steps:

- introduction of reforms in the system of selecting teachers;
- improvement in the living and working/service conditions of teachers;
- creation of an effective machinery for removal of grievances;
- involvement of teachers in the planning and management of education;
- involvement of teachers' associations in upholding the dignity of teachers, their professional integrity and curbing professional misconduct;
- preparation of a code of professional ethics for teachers and ensuring that they perform their duties in accordance with acceptable norms;
- Creation of opportunities and an atmosphere to promote autonomy and innovation among teachers.

Regarding the professional education of teachers, both the pre-service and inservice components will be overhauled to meet the thrust envisaged in the policy. District Institutes of Education and Training (DIET) will be organised for pre-service and inservice education of elementary school teachers and for personnel working in nonformal and adult education. DIETs, will, in due course, replace substandard institutions. Colleges of Teacher Education will be strengthened so that they are in a position to provide secondary teacher education of quality.

The National Council of Teacher Education (NCTE) will be responsible for accrediting teacher education institutions and will provide guidance on curricula and methods.

Role of the Teacher

From what has so far been presented in this module, it is possible for you to visualise your role as a teacher in implementation of the policy.

As you know, basically the principal role of a teacher in an educational institution is to provide effective teaching-learning experiences. Such experiences can be arranged in classrooms and through tutorials, personal guidance and field activities.

The policy places special emphasis on improving the quality of education. In order to achieve this, the content and process of curriculum transaction will require improvement. With this end in view, new textbooks, instructional materials and teacher guides will be developed. Thorough familiarity with and a complete understanding of these materials will be very necessary for you to provide effective teaching-learning experiences to the children.

The policy has suggested that physical facilities of schools will be improved in order to provide favourable conditions of learning. But provision of these physical facilities is not enough. Their effective utilisation is more important. It is expected that, as a teacher, you will make full use of these facilities.

Educational evaluation is another area where the teacher will have to develop

expertise. This expertise will help in the continuous and comprehensive evaluation of the learner.

In the area of elementary education, the teacher will have to take special steps to facilitate universal enrolment of children of the area that the school serves. Besides, he will have to take necessary steps for the universal retention of the children under his/her charge.

In order to ensure utilisation of material and human resources of the community for the betterment of the school and to improve the quality of education, the teacher will have to develop close and cordial relations with the community. For this, he will have to initiate such action, as will ensure the involvement of the community on a continuous basis.

In addition to providing effective teaching-learning experiences to learners, the teacher will have to participate in the management of a variety of services and activities which may be undertaken by the educational institutions to implement its programmes.

Along with effective transaction of the curriculum, the teacher is required to play a certain personal-social role so as to guide the learner towards an all round development of his personality. This implies of imbuing competence not only in content and methodology, but also the possession of certain values in the teaching profession. A professional code of ethics, which will be evolved by Teacher Associations, should serve as a guide for professional conduct.

In order to be effective, a teacher is required to update his/her professional competence regularly. For this, he/she will have to take part in various programmes that will be organised periodically as part of the continuing education of teachers.

As you interact with this module and the later modules in this course, you will have an opportunity to reflect upon various issues and thrust areas enunciated in the policy. It is hoped that this will help you to develop a positive attitude towards your role, i.e. the role required to improve the quality of education and, thus, contribute to the allround development of the child and society.

Suggested Discussion Questions

A few suggestive questions are given in this section. These questions will serve as a basis for initiating discussion during the transaction of the module. Additional questions may be framed by the resource person(s).

- Why is the policy statement considered a necessary first step for shaping the educational system?
- Why was the Programme of Action (POA) prepared once the NPE-1986 was adopted?
- Evolving a National System of Education is necessary. Comment.
- Why is it imperative to equalise educational opportunities by attending to the specific needs of those who have been denied equality so far?

- The concept of 'common core' in the national curriculum framework is a major thrust area of the policy. Discuss.
- What steps would you take as a teacher to get the full support of the community to play your role effectively?
- What specific training would you need to improve pupil evaluation?
- What activities have you adopted in your school from time to time to inculcate the right values among your students?
- In what specific ways can the proposed DIET/College of Education help you to play your role more effectively?
- As a teacher, what additional professional competence will your role demand in implementing the policy?

National Curriculum Framework for Primary and Secondary Education — an Introduction

Overview

A school curriculum has to be responsive to the needs and aspirations of a society that undergoes a change with the passage of time. This implies that the school curriculum has to be dynamic, failing which it will soon lose its relevance. The consensus and priorities of the nation should, therefore, be suitably reflected in the curriculum.

The National Policy on Education—1986 contains new directions for the re-orientation of the content and process of education. These guidelines are further elaborated in the National Curriculum for Primary and Secondary Education—A Framework, which has been developed by NCERT. As you go through this module, you will see inter-relationships between the national development goals, national concerns and priorities and the school curriculum. You will also understand why the need arises for curriculum change or modification from time to time. The need to develop a national curricular framework and to follow a decentralised process of curriculum development will also become clear. As a teacher, you will have to shoulder the responsibility of transacting the curriculum which is developed by national and state level curriculum development agencies. Therefore, it is necessary for you to familiarise yourself with important aspects of the national curriculum. This module, therefore, seeks to provide you with a broad understanding of national curricular framework.

Objectives

After completing this module you should be able to:

- recall the meaning and nature of the curriculum.
- see the importance of national curriculum framework in the context of a national system of education.
- recall the salient features of the national curriculum framework.
- understand the need and importance of core areas in the context of the acculturating role of education.
- understand the changed role of a teacher from a mere transmitter of knowledge to a facilitator of learning.

- see inter-relationships among national development goals, aims of education and the school curriculum.

Curriculum—Meaning and Nature

As a teacher you are devoting much of your professional life to curricular transaction in the classroom and outside. You must also have organised a variety of curricular and co-curricular activities with your students. The students utilise these activities as spring-boards for acquiring new knowledge and for developing appropriate skills and attitudes.

Work Sheet No. 1

- | |
|--|
| <ul style="list-style-type: none"> (i) List all the activities which you generally organise in your school. (ii) List all the activities which you would now like to organise in your school, if given necessary facilities. |
|--|

Collect
Collate
Discuss

A glance at the list of activities reveals that these are effective means for providing learning experiences to children. Can you think of a common term encompassing these activities? You are correct, if you have chosen the term “curriculum”. It is clear now that curriculum refers to all the activities and experiences that you plan and organise for learners in educational institutions to realise the aims of education.

Changing Nature of Curriculum

Some of you must have been teaching for a very long time. You are probably aware that there have been changes and modifications in the school curriculum at certain intervals. The thrusts of these changes in the curriculum have been in the objectives, content organisation, process of education and pupil evaluation. Today, the development of creative and independent thinking ability invariably finds a place in the objectives of the curriculum. There was a time when science and mathematics were not compulsory subjects in the school curriculum. But nowadays these form an integral part of school curriculum at all stages of general education. Following the Education Commission Report (1964-66), greater emphasis in the curriculum was given to activities related to work experience as a part of general education. Again, at the +2 stage, vocational education was given special importance. These examples indicate that the curriculum is dynamic in nature. It gets changed and modified with the changing needs and aspirations of society.

Work Sheet No. 2

- | |
|--|
| <ul style="list-style-type: none"> (i) List the changes that have taken place in the school curriculum and in the curriculum of your subject during the last 10 years. (ii) Why have these changes taken place? Discuss. |
|--|

Collect
Collate
Discuss

Concerns and Priorities

There has been a growing concern that, by and large, our system of education has not been able to respond to national needs and aspirations. What are these needs and aspirations? We have a cherished desire to develop a new social order based on equity, equality and justice. We need to preserve our cultural heritage and strengthen national identity and unity in order to counter a variety of divisive forces such as regionalism, casteism, linguism etc. There is also the need to lay emphasis on character building, respect for constitutional obligations, promotion of global perspectives, protection of environment, conservation of natural resources, observation of small family norms etc. Above all, education should be geared to play a variety of roles effectively. These are the acculturating role, combative role, liberating role, integrative role etc. The acculturating role implies refining perceptions and sensitivities so as to promote national cohesion. The combative role implies that there are certain destructive tendencies within the individual, and destructive forces within the society, which need to be fought against; the liberating role envisages that the child needs to be liberated from ignorance, superstitions etc., while the integrative role means integration of the child in society.

Learning Activity

Discuss among yourselves the concerns and priorities of present-day India. What goals of education emanate from these concerns and priorities? Prepare a list of objectives of education emerging from your discussion.

Collect
Collate
Discuss

National System of Education

The concerns and priorities discussed above are not of a local nature. They call however for the development of a comprehensive national approach to education—a national system of education and a national curriculum for school education. We need a national educational system also because glaring disparities exist in educational spheres from region to region and we have to ensure a minimum standard of attainment for learners at all stages of education. Certain minimum facilities must also be provided to schools in the country to ensure a reasonable quality of education for all children. The national system of education visualises that there should be a common structure of education throughout the country.

A national system of education does not mean rigid uniformity. It means just that, within a broad framework of common educational objectives for different stages, a common structure of education, a minimum standard of attainment for learners etc. the states will be free to design and implement their system in line with local needs and demands. Ours is a country which derives its strength and pride from its geographical, linguistic, religious and cultural diversities; our unity as a people is based on an appreciation of the richness of Indian culture. A national system of education has to be looked upon as an effort to reduce existing regional imbalances and ensure to every

child a minimum standard of education through a built-in flexibility for the teacher, the school and the local educational authority.

The salient features of such a system should be:

1. Up to a given level, access of education of comparable quality to all students, irrespective of caste, creed, location or sex;
2. Provision for equal opportunity to all not only in access, but also in the conditions for success;
3. A common 10+2+3 structure of education;
4. A national curricular framework which contains a common core, along with other components that are flexible;
5. Laying down the minimum levels of learning for each stage of education;
6. Fostering among students an understanding of the diverse cultural and social systems of the people living in different parts of the country;
7. Linkages with the world of work and development of entrepreneurship;
8. Lateral and vertical mobility of learners in order to further education and training through different modes; and
9. Strengthening of national institutions to play an important role in giving shape to the national system of education.

National Curricular Framework

A national curricular framework has to be an essential feature of the national system of education. At the national level, we can develop only a broad curricular framework so as to provide sufficient flexibility to the states to devise their own curricula. A uniform curriculum developed at the national level is not likely to be relevant to the needs and demands of different regions/states of the country. The National Curriculum for Primary and Secondary Education—A Framework, developed in this context has the following basic features:

1. Development of human resources for the realisation of the national goals of development.
2. Broad-based general education to all at the primary and secondary stages.
3. A common scheme of studies for elementary (primary and upper primary) and secondary stages.
4. The common core components as indicated in the NPE-1986.
5. Defining Minimum Learning Outcomes (MLOs) for each area of learning at all stages of education.
6. Provision for flexibility in terms of selection of content/components and learning experiences, which would facilitate the attainment of minimum levels of learning outcomes.
7. Child-centred and activity-based processes, rather than the teacher-centred approach during the transaction of curriculum.
8. Recasting of the examination system and introduction of continuous and

comprehensive evaluation that incorporates both scholastic and non-scholastic aspects of education, spread over the total span of instructional time.

9. Establishment of an appropriate machinery, such as a National Testing Service (NTS) for the selection, and development of norms of comparable competence across the nation.
10. Applicability of the curriculum to all learners, irrespective of their modes/channels of learning in order to ensure comparability of attainment and to facilitate horizontal and vertical mobility of the learners.
11. Provision of essential facilities for effective transaction of curriculum in all schools/non-formal learning centres.

Work Sheet No. 3

Prepare a list of those provisions which need to be provided for the effective implementation of curriculum.

Collect
Collate
Discuss

Common Core

The search for national identity has been on since resistance to colonialism in the country began. This search has not yet ended. As a matter of fact, it is more acutely felt now than ever before. Therefore, it is only natural that the NPE-1986 should have made a strong plea to initiate curricular efforts for the promotion of national integration and the cultivation of values as enshrined in our Constitution. In this context, ten common core components have been identified. It is visualised that in their transaction, emphasis will be placed on instilling nationally shared perceptions and values. The following themes have been identified as common core components, which are sought to be made obligatory for all schools in the country:

1. History of India's freedom movement.
2. Constitutional obligations.
3. Content essential to nurture national identity.
4. Indian common cultural heritage.
5. Egalitarianism, democracy and socialism.
6. Equality of the sexes.
7. Protection of environment.
8. Removal of social barriers.
9. Observance of a small family norm.
10. Inculcation of the scientific temper.

Evaluation

The external examination held at the end of class X or class XII and the annual gradewise examination lacks balance as it lays more emphasis on written than on oral communication; tests only the lower level of mental abilities, like memory, knowledge

etc. rather than the higher order of mental abilities like independent thinking, creative thinking etc.; is more suitable for academic subjects than the practice-oriented subjects like work experience and physical education; confines itself to the testing of cognitive abilities and ignores the affective aspects of personality. Moreover, there are serious reservations about the reliability and validity of examination marks. NPE-86 and National Curriculum Framework have noted the inadequacies of the existing examination system and have made a number of recommendations to enhance its relevance.

'Internal', 'continuous' and 'comprehensive' are the key-concepts of the proposed evaluation system. Internal evaluation, to be conducted by the teacher, will facilitate the use of varied techniques of evaluation including oral examination. The system of continuous evaluation will ensure extensive coverage of syllabus on the one hand, and that of different kinds of objectives on the other. This will also make the use of a variety of assessment techniques possible. The comprehensive evaluation will make it possible to take care of the affective and psychomotor aspects in addition to the cognitive aspect of personality.

Interactive Teaching

As teachers, you have had the experience of transacting curriculum in your classrooms. You will agree that in the majority of classrooms, the mode of curriculum transaction does not cater for the development of different abilities and skills in a balanced manner. It is also not relevant to the stated objectives of the curriculum. While the list of objectives includes development of independent thinking, originality, productivity, critical thinking, scientific temper etc., in practice little effort is made to develop these abilities. The most prevalent style of teaching is transmissive or expository, which puts a premium on memorisation rather than independent thinking. It places the teachers at the transmitting end, and the students at the receiving end, and so, the delivery system is devoid of interaction between teacher and student. In fact, the existing system of external examination is largely responsible for the use of this approach.

The National Curriculum Framework has visualised a change in the teacher's role from that of a mere transmitter of information to that of a facilitator of learning. Interactive teaching based on teacher-student dialogue is recommended. It has been visualised that teaching learning strategies may assume a variety of modes and may involve a variety of activities on the part of learners and teachers, viz., observation, collection of materials, materials and information, demonstration and experimentation, project assignment, playway activities/educational games, educational excursions, role playing and dramatisation, group discussions and group activities, conversations, and discussions, inductive-deductive teaching, problem-solving, discovery-learning, etc. The use of these strategies will go a long way in making the transaction of curriculum, child-centred.

Review and Feedback

1. Why do we develop only a curriculum framework at the national level?

2. What are the advantages of 'decentralisation' in curriculum designing?
3. What role does the teacher perform in curriculum development?
4. Name some more areas which can be included in the common core of curriculum.
5. What improvements need to be made in the method/style of education? Discuss.

Suggestions for Extended Learning

1. Study the National Policy on Education—1986 and identify its salient features.
2. Study the National Curriculum Framework and comment on various recommendations given in it.
3. Go once again through the books on methods of teaching already studied in your pre-service training.

Follow-up Activities for School Situations

1. State your observations regarding the existing curriculum.
2. What are your suggestions for the improvement of the prescribed curriculum of your subject in respect of the classes you teach?
3. Do you find that it is relevant to the needs of individual growth and societal development?

Equal Opportunity of Education for Deprived Groups (Scheduled Castes and Scheduled Tribes)

Overview

Equity in education has been perceived in a wide perspective in the National Policy on Education, 1986. It recommends "to provide for equal opportunity to all not only in access but also in the conditions for success." The role of the teacher becomes truly significant in such a context.

The term 'Equalisation of Educational Opportunity' was generally interpreted upto now in terms of opening of schools within walking distance for children, providing residential facilities to children, admission of children of all communities to schools, reducing the dropout rate and increasing the retention rate of children through various measures, provision of non-formal education centres for the non-attending children, grant of pre-matric and post-matric stipends and provision of various ancilliary services to facilitate schooling of children. It is common observation that such provisions have either not been fully utilised or not understood in the right perspective by the beneficiaries. Second, economic poverty though a major reason, is not the only constraint in the educational development of the educationally backward sections of Indian Society. There are other factors, such as social and psychological restraints, lack of motivation in children vis-a-vis their education, a low self-concept of their parents, inadequate facilities in homes, the passive attitude of teachers to the educational progress of learners from backward communities. Teacher's active participation in the educational development of these communities in general, and individual attention to their children in particular, will definitely pave the way for their success in education.

Let us look at the educational progress of the Scheduled Castes and Scheduled Tribes vis-a-vis non-Scheduled Castes and non-Scheduled Tribes' population in the country. According to the 1981 census, the all India literacy rates of Scheduled Castes and Scheduled Tribes were 21.38 and 16.35 per cent respectively, as against 41.20 per cent of the non-Scheduled Caste and non-Scheduled tribe population sectors. The progress of the education of women of these communities is poor. The literacy rates of women of the Scheduled Castes and Scheduled tribes were 10.93 and 8.04 per cent as against 29.43 per cent of other population sectors. The incidence of higher education in these communities is dismally low. The imbalances in educational development

between different population sectors lead to many social and economic ills, in addition to the loss of human resource development in the country in general, and the non-harmonious development of the individual learner's personally.

Objectives

A study of this module will help you to understand that:

- Educational backwardness amongst the Scheduled Castes and Scheduled Tribes has been due to social deprivation and economic poverty meted out to these communities in the pre-independence period.
- The inequalities in educational development between educationally backward communities and other sections of Indian society ought to be minimised by special efforts.
- The behavioural discrimination shown towards the children of the Scheduled Castes and Scheduled Tribes, even inadvertently, result in their disinterest in studies, early withdrawal and development of a low self-concept.
- Teachers have a special role towards the education of children of these communities, especially to first generation learners.
- Teachers have a role to sensitise the parents and community members of the Scheduled Castes and Scheduled Tribes on the schemes and incentives for them and to motivate them to educate their children.
- A crash programme of universal functional literacy and teacher's whole hearted participation would bridge the gap and imbalance in the education of the Scheduled Castes, Scheduled Tribes and other communities in Indian society.

Activity No. 1

You may have noticed some forms of discrimination against Scheduled Caste and Scheduled Tribe children inside and outside the classrooms. What are such situations? What is the reason for discriminatory behaviour? What is the rationale for such behaviour in day-to-day school activities? What roles are expected of the teacher to ensure a non-discriminatory environment in the school and community?

The discussion will have revealed a number of situations in which students, staff members and other members of the community, unconsciously or inadvertently call students of some communities by caste names, thus humiliating them. This has to be stopped and replaced by building a congenial social climate and educational environment in the school.

Some suggestions that could help in the development of a school climate conducive to the educational progress of children of Scheduled Castes and Scheduled Tribes are as follows:

- (i) The teacher's example in his/her own behaviour towards students belonging to Scheduled Caste and Scheduled Tribe communities is the most powerful way to build up a congenial climate.

- (ii) As a rule, the school staff should seek, provide and ensure non-discrimination between the children of Scheduled Castes, Scheduled Tribes and other communities.
- (iii) Use of the caste names or derogatory words while calling roll calls or naming children should be avoided.
- (iv) Teachers should lead all the children equally to participate in the curricular and co-curricular activities of the school, including games.
- (v) Frequent meetings between the staff, school teachers and parents of Scheduled Castes and Scheduled Tribes children should be arranged. At these meetings, details of the schemes for promoting education amongst Scheduled Castes and Scheduled Tribes should be explained. It should be impressed upon them that they must continue the education of their children. Special attention should be paid to motivating them for the education of girls.
- (vi) If there is an adult education centre in or around the school, teachers should suggest to illiterate parents the advantages gained by attending functional literacy classes in the centre.

Activity No. 2

Imagine the following school situation:

Many children belonging to the Scheduled Castes and Scheduled Tribes are first generation learners. They come from a comparatively poor environment. They are not neat or smart. They speak the dialect in a pronounced way. Their usage of standard language may be poor and their vocabulary is under developed as compared to their peers in other sections. They may not have formed the initial mathematical concepts. On the other hand, their manipulative skills may be better developed. They may be sharp and clear in their observations. They may be more enthusiastic to act, finding it difficult to sit and listen passively. Because of the lack of a congenial home environment, and also because of the absence of any supervisory facility at home, these children may not be in a position to complete their home assignments. Secondly, as their parents are usually employed as landless labour or in other manual or agrarian activities, the children are not able to conceptualise their future as educated persons. They hardly have a model to pursue or aspire to a higher estimation of themselves.

In such a situation, how would a teacher prepare the instructional plan? How should he group children with different abilities to make homogeneous combinations? In what way can the initial difficulties, due to the impoverished home background be removed? What should be done if the children from Scheduled Castes and Scheduled Tribes are not able to complete their assignments? How can these children be helped to develop a healthy self-concept?

There is a need to take some preparatory classes of children coming from poor home backgrounds, including the children of the Scheduled Castes and Scheduled

Tribes. These classes may be conducted two to three weeks in advance of the general admissions. The teacher may conduct lessons on healthy habits, personal and environmental cleanliness, eating habits, etc. The children may be led to participate in discussions, story-telling, recitation and help in improving the pronunciation of words and pick up the use of standard language. Initial concepts of mathematics may also be introduced. The objective of introducing preparatory classes is to raise the school entry abilities level of these children, so that the class, with a teacher, may be a homogeneous group. In other classes too, if the teacher notices heterogeneity in the levels of attainment, organisation of preparatory classes for a short period can help substantially.

Students coming from Scheduled Castes and Scheduled Tribes are also likely to be deficient in scholastic areas. They require compensatory educational programmes. The school may provide some remedial education programmes. These may be planned on a short-term basis, taking a few units as the content. Adoption of instructional strategies, such as peer group learning, monitorial assistance, diagnostic testing and tutoring could help to improve the educational levels of the learners.

Provision of outdoor games and activities, co-curricular and with experience activities also helps in the retention of children in the schools, and creates an interest in them for continued schooling.

Activity No. 3

Let us look again at the concept of equity in education enunciated in the documents like the National Policy on Education, Programme of Action, National Curricular Framework for Primary and Secondary Education. It is spelt out as follows:

- (i) Providing for equal opportunity to all, and also providing conditions for success;
- (ii) equality between sexes and non-discrimination;
- (iii) looking into the special requirements of first-generation learners;
- (iv) excellence in educational opportunity;
- (v) incentives to indigent families to send their children to school regularly, till they reach the age of 14 years;
- (vi) constant micro-planning and verification to ensure that enrolment, retention and successful completion of courses by Scheduled Caste and Scheduled Tribe students do not fall short at any stage.

The teachers have a major role to play in explaining to parents and community members the scheme of incentives. It is the teacher who alone comes in contact with the parent to discuss the needs of pupils, and the contribution of education to their present and future life. Several parents just misutilise the incentives, pre-matric and post-matric stipends. They hardly understand the role of education in developing a wholesome personality for the child. They have no idea of their future needs. The teacher's role is that of a missionary, an agent of change and a facilitator. No one can be as convincing to a parent as a teacher.

The new concept of educational planning at the micro level has been accepted under the National Policy on Education. District Institutes of Education and Training, and District

Boards of Education are being established to plan, organise, implement and evaluate the developmental activities in education. The maximum advantage of micro level planning should go to educationally backward areas and educationally backward communities. Though the administrative unit for micro level planning would be the district level, the real unit is the sphere of activity of a teacher, because it is he who acts first and fast. In his endeavour lies the success of the programme.

Activity No. 4

Prepare a group activity for mobilising the opinion of Scheduled Caste and Scheduled Tribe communities of your area in favour of girl's education. List the activities and assign these to your fellow teachers. You could practise the activity in a simulated situation in your camp.

Providing Equal Opportunity of Education to Women

The status of women in India has seen many ups and downs. History tells us that throughout the Vedic period, women were given a place equal to men. They performed the sacred rites and yagnas, and were men's equal in upholding 'Dharma'. They could fight wars, go to battlefields, participate in all festivals, take part in philosophical discussions; and remain unmarried if they so desired without taboos being attached to their social status.

But with the passage of time, their position deteriorated and their status declined. Manu finally declared that:

'... a woman is never fit for independence' though he also said,
'Where women are honoured, there the gods are pleased; where they are not honoured, no sacred rites yield rewards.'²

But it is relevant to remember that man and woman are complementary to one another. It would be a different world if only both could lead a harmonious life, working as a team, and not as rivals. Both are human beings and both feel pain and pleasure, misery and happiness. Why then should there be discrimination in society's approach towards them? One often wonders why it is that a woman is treated as a second class citizen in independent India? She does not need pity, nor does she need to be treated as the 'weaker' sex.

This has been a concern of educationists for quite long, and with the advent of the National Policy on Education, 1986, it is envisaged that provisions will be made for equal opportunities to women with a view to removing disparities and attending to their specific needs.

One method of doing so is to eliminate sex-bias and sex-stereotypes from school textbooks. (POA p. 107 : 5(g))

This module will help you to understand what exactly is meant by sex-bias in textual materials. It has been prepared with a view to making you conscious of the ways through which undifferentiated treatment can be given to boys and girls. This awareness

is bound to bring about attitudinal change in your behaviour towards your students, and also in the behaviour of your students with one another. The stigma of the lower status of women is reflected in textbooks and supplementary reading materials meant for school children. The growing awareness in society, the constitutional provisions and efforts on the part of the government to remove the stigma and taboos make it imperative that textual materials are free from any sex-bias, as these play a vital role at the formative stage of the child's education and life.

Objectives

After completing the exercise given in this module, you will be able to:

- screen and evaluate textual materials with a view to ascertaining whether or not it has any content derogatory to the status of girls and women.
- locate such materials in the content that may sometimes appear to be innocent, yet carry undesirable implications.
- evaluate textual materials on two counts:
matter prejudicial to sexes (negative aspects,
matter promoting harmonious relationships between men and women (positive aspects)

Explanation of Negative and Positive Aspects

A. *Negative Aspects*

1. Discrimination and sex-bias operate because of prejudices in society on the role of women and negative perceptions at different levels. Such discrimination may be discernible in textual materials in their thematic and linguistic content, as well as in presentation of materials.

(i) **Thematic Content:** There may be an imbalance in themes relating to women in the lessons/chapters included in the books. Less emphasis may have been given to themes concerning women. The number of female characters in the text may also be lower than that of the male characters. The treatment of a particular theme may even lead to projecting an inferior and stereotyped image of women.

Evidently each lesson/chapter of the book under review has to be evaluated with a view to finding out whether or not the theme (including the number of chapters) is adequately representative of the equal status of women.

(ii) **Linguistic Content:** Thematic content finds expression through linguistic content. In language textbooks the elements of language are the focal points and the theme serves just as a means. The use of certain ideational content expressed with different sets of grammatical and vocabulary items within their limited scope, suitable for different grades, occasions and persons, help in communicating the writer's attitude towards persons and/or things. Therefore, any language content, utterance, and/or figurative expression which explicitly denigrates the status of women has to be mention-

ed and deleted. The content which tarnishes the image of women and lowers their status also has to be located and the relevant portion specifically mentioned.

(iii) *Presentation*: Communication of the total meaning is made possible through a particular way of presenting the thematic content with the help of the linguistic content. Obviously, presentation is of paramount importance and has to be borne in mind while evaluating the book from the view-point in question. A person's image is elevated or tarnished by the way it is projected. Ample care has to be taken to find out in each lesson whether or not the female characters are portrayed in a biased manner and, if so, how this can be modified.

2. *Areas of Sex-Bias*: The role of women in different walks of life has not been properly understood and appreciated by parents, other members of the family, in-laws, society in general and, surprisingly, by women themselves. The negative attitude is mainly responsible for undermining the significant role of women in social, economic, cultural, historical, religious and educational fields. A woman is still considered a burden on the family, incapable of doing much physical labour and given the treatment of a second rate citizen.

3. *Social Evils*: Most social evils in our society today clearly reveal men's highly prejudicial attitude towards women. Social evils like the dowry system, bride-price, prostitution, child marriage and false beliefs are a curse for society and an impediment in the progress of the nation. The evil of the dowry system clearly shows that women are still considered items of property which can be disposed of at the will of men.

4. *Stigma Attached to Certain Practices*: A double set of norms is clearly revealed in the way a widow and widower, or a spinster and a bachelor are treated by society. Similarly, treatment meted out to a childless women is highly discriminatory. The stigma attached to the working women and the education of girls needs to be uprooted. All such references in the text should be carefully spotted, noted and specifically mentioned.

5. *Incapacities and Incapabilities*: Women, by and large, are still considered incapable of competing with men in many walks of life. It is held that they cannot excel in management or leadership, though it may be true of both the sexes. There may be men who are meek and weak and women, who are strong, persuasive, dynamic and intellectual. This kind of discrimination is not fair to either sex. The text needs to be read carefully to note these negative aspects, if any.

6. *Dependence on Men*: It is considered that women cannot be independent and are not capable of taking their own decisions. Such prejudicial statements also need to be pointed out.

7. *Illustrations*: It is essential for the illustrations to be relevant to the text and helpful in explaining, supplementing and enhancing the theme. The women characters should also be illustrated in a dignified way, and not as sex-symbols. The illustrations should be purposeful and realistic.

B. Positive Aspects

1. *Capabilities*: Women have proved themselves, both physically and intellectually, equal to men, if not better. They do not lag behind men in administration, management or leadership. The evaluator has to locate all such references in the text.
2. *Self-Reliance*: Women can be self-reliant too. There are innumerable instances where they have put up a tough fight, proved their self-respect and become a source of inspiration. The evaluator may look for such references and mention them.
3. *Emotional Relationship*: It is not fair to take women for granted in so far as their emotions are concerned. They do so much for the family at their own cost because they are emotionally attached to their families. They should not be ill-treated merely because of this emotional attachment. Instead, this is a quality that needs to be highlighted and praised.
4. *Equality of Opportunity and Wages*: The Constitution guarantees equal opportunities for development of the personality of men and women, so much so indeed that there is a provision that they will get equal wages for the same kind of work. However, in practice discrimination is still discernible. Healthy competition in the development of personality of both sexes is necessary and desirable.
 Women should be provided with equal opportunities in social, religious, political, professional and cultural spheres, and such references may be mentioned.
5. *Mutual Cooperation*: The family is an integral part of society as a whole. Therefore, the progress of the family and society depends on mutual cooperation, affection and the feeling of oneness. Evidently in matters pertaining to the family and social affairs, both should cooperate and discharge their duties effectively. Decisions arrived at on the basis of mutual consultation are of considerable help in achieving success.
6. *Removal of Social Stigma*: The traditional outlook towards women, attaching stigma to childless women and widows and disapproval of their remarriage, has to be strongly condemned. Such portions in the text as highlight rejection of these stigma have to be located and specifically mentioned.
7. *Women's Contributions in Improving Their Own Status*: Women can contribute considerably in solving their own problems. Women who have made a significant contribution in the field of women's uplift, women's welfare and social reforms through various agencies have to be highlighted.
8. *Women as Source of Inspiration*: There have been women like Jija Bai, mother of Shivaji, or Ratnawali, wife of Tulsidas, who have proved to be a source of inspiration to their children or husbands. This can, and does happen in the life of ordinary men. Such instances need to be highlighted.
9. *Women as Symbols of Love and Sacrifice*: There are hundreds of instances where women have come forward and sacrificed their own interests for the sake of their husbands, children, society and even the country. These need to be highlighted.
10. *Fair Representation of Women's Character*: It is just fair that women should be adequately and fairly represented in textbooks, that women authors find a due place in

them. There are women writers who depict women who are not stereotyped, but strong and self-reliant.

Learning Activities

You have been a teacher for a number of years and have fruitful experience of dealing with children in actual classroom situation. Now, you have a clear idea of how discrimination operates between boys and girls in textual materials, and what are the relevant points in their negative and positive behaviour. It is the right time now to stop for a while, and reflect on them to find out:

Activity Sheet No. 1

- Have you noticed any focal point of such discrimination in the textual materials that you have been teaching now for years?
- If so, try to write them down on a separate sheet of paper.

Collect
Collate
Discuss

Now that you have some materials in which discrimination on sex-bias operates because of prejudice by society towards the role of women and negative perception operating at different levels, let us look at these and find out:

..... Is this discrimination discernible in the textual materials in their thematic or linguistic content or both? Or does this discrimination appear in the style and presentation of material as well?

We have already discussed under negative and positive aspects what is meant by discrimination in thematic and linguistic content.

Activity Sheet No. 2:

Write, in a few sentences, what you understand by discrimination in thematic content.

Collect
Collate
Discuss

As you have gathered by now through your discussions you will find that there is an imbalance in themes relating to women in the lessons/chapters included in the books.

Less emphasis may have been given to themes concerning women. The number of girls and women in the text may also be less than that of boys and men. Evidently each lesson/chapter of the books has to be screened with a view to finding out whether or not the theme (including the number of chapters) is adequately representative of the equal status of women.

As you have gathered from this discussion, sex-bias in thematic content reflects social stigmas and taboos attached to childless married women, spinsters and widows; the different treatment given to girls so far as educational or other opportunities in life are concerned; economic independence; cultural background, the dowry system, bride-price, child marriage, superstitions and false beliefs, dependence on men, etc.

According to this approach, all these areas where differential treatment is given to girls need to be removed from the textbooks/supplementary reading materials to make girls and boys stand at par in all walks of life. The overall aim of this approach is to find out the negative approach, that is mainly responsible for undermining the significant role of women in social, economic, cultural, historical, religious and educational life.

Activity Sheet No. 3

Can you now locate and list various portions of such thematic content which need to be changed?

and

Can you suggest modifications to remove these stigmas and taboos from the minds of your students while teaching?

Collect
Collate
Discuss

Yes, of course, now you are aware that most social evils in our society today clearly reveal men's highly prejudicial attitude towards women. Social evils like the dowry system and prostitution are a curse for society, and an impediment in the progress of our nation. These evils are proof that women are still considered items of property which can be disposed of at the will of men.

Activity Sheet No. 4

Write down in a few sentences what approach you would adopt to bring about a balance in treatment, if such references occur in the textual materials?

and

How will you make children aware of these evils so that they start thinking about the place of women in positive terms?

Collect
Collate
Discuss

Now you have located areas of sex-bias in the textual materials, this is the right time for you to rectify the mistakes which may be responsible in developing wrong attitudes towards women/girls amongst your students. Now is the time that the boys and girls are made conscious of the fact that women have proved equal to men both physically and intellectually; that they do not lag behind in administration, management or leadership.

There are two methods for doing this:

Activity Sheet No. 5

Go through the textbooks/supplementary reader and locate such references which depict this aspect of positive behaviour amongst women, and also list the negative portions where you would like to tell your students that times have changed and many women have appeared on the world scene who have given evidence that they can be regarded as equals or even better than men in their performance.

Collect
Collate
Discuss

You will find that you now have a ready reckoner with you which will facilitate your work of creating awareness amongst your students that women today are more self-reliant, self-propelled and self-directed than they were.

The role of women in different walks of life has not been correctly understood and appreciated by parents, other members of the family, in-laws, society in general and surprisingly, by woman herself.

Now is the time for you to bring this fact home to children—that women can also be self-reliant. There are innumerable instances where they have put up a tough fight and proved themselves, their self-respect and have become a source of inspiration to others.

Activity Sheet No. 6

Note the language items from the textbook/supplementary readers which project the image of women.

Collect
Collate
Discuss

Communication of the total meaning is made possible through a particular way of presenting the theme, with the help of linguistic content. Obviously, the author's presentation and style is of paramount importance and has to be borne in mind while screening the book from this angle. The image of a person is elevated or reduced by the way it is projected. Ample care has to be taken to find out in each lesson whether or not the female characters are portrayed in a biased manner. It is high time that you pointed out to children that our Constitution guarantees equal opportunities for development of the personality to both men and women, so much so indeed that there is a provision for equal wages for the same kind of work. However, discrimination is still discernible. Healthy competition for the development of personality of both sexes is necessary and desirable, and women should be provided with equal opportunities in social, religious, political, professional and cultural spheres. Try to mention such references to your students.

Activity Sheet No. 7

Try to ascertain from the text if there is any evidence of harmonious relationship between the members of family.

Collect
Collate
Discuss

Try to impress upon your students that the family is an integral part of society as a whole. Hence, the progress of the family and of society at large depends upon mutual cooperation, affection, the feeling of oneness and a sense of belonging. Evidently, in matters pertaining to family and social affairs, both husband and wife should cooperate and discharge their duties more effectively. Decisions arrived at on the basis of mutual consultation are of considerable help in having a happy family and achieving success.

Activity Sheet No. 8

Pause and think if you are to treat your students—boys and girls—at par. List the activities in which all your students contribute equally, e.g. both curricular and co-curricular activities such as games and sports, dramatics, fine arts (singing, dancing, drawing and painting), creative writing etc.

Collect
Collate
Discuss

This is the time to look into your own heart and see whether you yourself treat your students the same way, giving them opportunities to grow into self-reliant personalities. If not, give your reasons and finally, ask yourself:—

Is it just to differentiate between boys and girls and to treat them with a bias? If not, then how have you tried to improve upon the situation and what role can the teacher play in achieving the aim of eliminating sex-bias.

Meeting Educational Needs of Children with Learning Problems

Overview

We have children with learning problems in our classrooms. These children have learning problems because of factors either inherent in themselves, or in the learning environment, or both. This module deals with learning problems of one special group of disadvantaged children and ways of meeting the educational needs of such children. The learning activities involve (a) individual activities of doing paper-pencil exercises and reading; (b) group work; and (c) discussion in plenary sessions. While reading you will be required to do several interesting paper-and-pencil exercises. You will enjoy doing these exercises. So keep writing material at hand before starting reading. After the completion of the module, you will be required to evaluate your learning, using the self-check questions given at the end.

Objectives

After completing the module, you are expected to:

- state at least one new way of looking at the learning problems of children in your classroom;
- describe the procedure for identifying the causes of learning problems inherent in the child and classify children according to the causes of their learning problems;
- suggest at least three action points for regular teachers to meet the educational needs of children with learning problems identified above;
- list the agencies and organisations that teachers may contact for assistance in meeting the educational needs of children with learning problems identified above; and
- suggest follow-up action that you propose to undertake to meet the educational needs of such children in your classroom.

Learning Activities

You have been working as a teacher for some time. During your teaching career you

must have encountered children about whose learning and performance you have always felt satisfied. At the same time you must have encountered children who could not learn and perform as you may have expected, despite your special attention. Obviously, these children face learning problems. Other teachers may have shared with you such problems in formal or informal discussion. Think them over and list the causes of learning problems of such children in the light of your experience as a teacher.

Activity Sheet 1: Possible Causes of Learning Problems in Classrooms

I think that the learning problems of my pupils are due to:

- | | |
|----------|-----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |
| 7. _____ | 8. _____ |
| 9. _____ | 10. _____ |

You have listed the causes of your students' learning problems. Classify these causes into categories on the basis of some common characteristics. For example, poverty and illiterate parents can be classified under socio-economic background. Please try. You can discuss the matter with your colleagues. At the end of group or individual work, your classification will look like:

Activity Sheet 2: Classification of Learning Problems

Category	Learning Problems Classified under the Category	
1. _____	(i)	_____
	(ii)	_____
	(iii)	_____
	(iv)	_____
2. _____	(i)	_____
	(ii)	_____
	(iii)	_____
	(iv)	_____
3. _____	(i)	_____
	(ii)	_____
	(iii)	_____
	(iv)	_____

4. _____ (i) _____
 _____ (ii) _____
 _____ (iii) _____
 _____ (iv) _____
5. _____ (i) _____
 _____ (ii) _____
 _____ (iii) _____
 _____ (iv) _____
-

An examination of the causes listed and classified by you indicates that some of them relate to the learning environment at school or home, while others lie in the child. For example, the unfavourable attitude of parents or social disadvantage refers to the learning environment at home and in the community. Inadequate instruction, on the other hand, refers to the learning environment of the school. Lower level of intellectual functioning, hearing problem or visual problem lie in the child. Those deficits do create learning problems. Although their cause can be attributed to the environment in the sense that the corrective and curative measures for overcoming the effects of the disability¹ have not even been initiated or are not adequate. But, as teachers, we cannot ignore these children and suitable corrective and curative measures will have to be undertaken. In the absence of such measures, the learning problems of these children will continue to multiply and, under the stress of frustration, they are likely to drop-out sooner than later. If they cannot drop out owing to parental pressure, they may develop aggression and develop behaviour problems which are not only detrimental to their well-being but it may disturb the educational progress of other children.

Dealing with these children in regular schools is the focus of this module. Other causes have been dealt with separately. Some disabled children, particularly children with mild disabilities like lower level of intellectual functioning and deficits in adaptive behaviour, visual-impairment, hearing-impairment, and locomotor-impairment, may already be in your classrooms. You must deal with these children to improve their learning and performance. Think a while, and list the action you take to deal with such children in your classroom. Also think about the action that can be taken further.

-
1. Impairment: An impairment is loss or damage to some part of the body as a result of which normal functioning is disturbed. It also includes loss or damage to psychological processes like perception and memory.
- Disability: Impairment leads to loss or reduction of functioning ability in the personality structure of the persons concerned. Thus impaired functional ability in an individual is known as his disability.

Activity Sheet No. 3:

Teacher Actions: Dealing with Children with Disability

Disability	Action being taken	Action that can be taken
1. Locomotor disability	(i) _____	(i) _____
	(ii) _____	(ii) _____
	(iii) _____	(iii) _____
	(iv) _____	(iv) _____
2. Lower intellectual functioning	(i) _____	(i) _____
	(ii) _____	(ii) _____
	(iii) _____	(iii) _____
	(iv) _____	(iv) _____
3. Mild or moderate hearing loss	(i) _____	(i) _____
	(ii) _____	(ii) _____
	(iii) _____	(iii) _____
	(iv) _____	(iv) _____
4. Speech Impairment	(i) _____	(i) _____
	(ii) _____	(ii) _____
	(iii) _____	(iii) _____
	(iv) _____	(iv) _____
5. Partially-sighted	(i) _____	(i) _____
	(ii) _____	(ii) _____
	(iii) _____	(iii) _____
	(iv) _____	(iv) _____

Some teachers like you have tried several ways to deal with the learning problems of disabled children in regular classrooms. This section describes how they tried to organise learning for such children.

The first step in dealing with children with learning problems refers to their identification. The children with disability sometimes have an observable deformity. For example, a child may have thin legs, a hump or a squint. There are children who usually complain about health, pains, fatigue remain absent. Some children show poor academic performance consistently. Such children are likely to have a disability. The teacher may prove the problems of such children further through observation of their behaviour and characteristics. Once children with learning problems are identified, children with learning problems arising out of the disability, are specified. These children are referred to appropriate persons/agencies for two reasons. They have to undergo a cure for their disability. For example, children with a hearing problem may require medical help. Second, they may require correction (hearing aid) in order to overcome the disability. A child with a visual problem may require lens or a

magnifying glass. A child with locomotor disability may require crutches or a wheelchair to move around or some mechanism for adjustment of hands for writing.

The curative and corrective measures are accompanied by adjustment in curriculum and instruction with the objective of making the curriculum accessible to such children as to other children. Each area of disability has been discussed specifically within this framework. Guidelines for identification of the disability and education of children have been presented.

Children with Locomotor Disability

Children with some physical disabilities may have locomotor problems. Locomotor problems refer to the problems relating to muscles and joints. They affect mobility of limbs and extremities. These children may find difficulty in moving around. They have learning capability like other children. However, they may have some specific problems. For example, a child having rigidity in the finger muscles may have a writing problem. They may also have posture problems, which bring in fatigue and limit their performance in certain learning activities. These children also develop adjustment problems because of non-acceptance or ridicule by their peers. For these children, identification is easier as the disability is usually observable.

A. Identification

1. Observable deformity in _____
 - Neck _____
 - Hand _____
 - Fingers _____
 - Waist _____
 - Legs _____
2. Has difficulty in sitting, standing and walking _____
3. Has difficulty in picking up, holding objects, and putting them on the ground _____
4. Frequently complains of pains in the joints _____
5. Has difficulty in holding the pen to write _____
6. Walks with jerks _____
7. Involuntary movements of limbs _____
8. Has amputated limbs _____

The teacher, in cooperation with parents of the children, may take action to provide relevant aid for mobility of the limbs and functioning of the extremities. These services are available with District Rehabilitation Centres. These can also be obtained from hospitals through primary health centres.

B. Education

It is essential that the teacher himself accepts such children. He should avoid sarcasm and taunting the child for his disability. Other children noticed indulging in such behaviour should also be discouraged. But at the same time the child should never get the impression of being pampered. He should be involved in all learning activities as an equal partner with his peers. He should also be required to run errands like other children. The teacher encourages peer interaction on the basis of mutual respect, help and cooperation. This is facilitated if children understand the disability of a disabled child.

In classroom suitable adjustments in view of the disability may be made in seating arrangements. For example, children with crutches and wheelchairs can be seated on the right front space in the classroom, so that the movement of other children is not impeded. It also provides space for keeping crutches against the walls. The arrangement should be such as allows for the independent movement of the child, to have the benefit of incidental learning. If there is a child with a wheelchair, ramping of the passage to the school and the classroom will have to be done.

It has been observed that recreational needs of these children are ignored in the school because of their disability. It may be ensured that they have adequate opportunity to participate in games, physical activities and recreational activities at their level of functioning. Peers may be encouraged to join them in such activities.

In problems of learning by the children with rigidity in limb movement, a lot of practice is needed. For example, writing with the hand, using adjustment aids requires graded practice with reinforcement. In the assessment of performance of these children, particularly for grading or marking, their disability needs to be given due consideration. If they have difficulty in writing, they may be provided with extra time and, if necessary, oral testing may be used. In some areas they can record their answers on an audio cassette. For example, in a history paper where language mistakes in spelling are not accounted for, the answers can be recorded on an audio cassette. Wherever available, they may be provided with the facilities of a word processor.

Activity Sheet 4: Share your Experience

Did you, as a teacher, have a chance of dealing with a child with locomotor disability?

If yes, describe in about 25 words how you adjusted your teaching and classroom arrangement for:

- (a) Children with problems of movement from one place to another.
-

(b) Children with problems of posture arising out of muscle tension.

(c) Children with problems of muscle rigidity interfering with their academic learning/skills.

Children with Visual Impairment

There are children who are blind. They do not have sufficient vision to find their way while walking. They cannot read the usual text and need braille, which is read through touch. These children are identified easily. There are partially sighted children. The vision of some of these children can be corrected through a lens. But some can read only large print of 18 point and above. Some require magnifying glasses to read. Some children have a restricted field of vision. It is necessary to identify such children and provide special help towards their education.

A. Identification

Much reading from the book and use of the blackboard is required for academic learning. Visual impairment results in several learning problems. Such children need to be identified. Salient observable behaviour is:

-
- Observable deformity in the eye(s).
 - Rubs eyes frequently
 - Frequent reddening of eyes
 - Covers one eye and tilts the head forward
 - Holds objects including the book close to his eyes
 - Asks other children for help when taking notes from the blackboard
 - Blinks frequently—squints eyelids together
 - Watery eyes
 - Complains about headache following close eye work
 - Bumps into people or objects
-

If the teacher feels that any child displays some of this behaviour, he may refer him to the PHC/hospital for an eye check-up. His parents also need to be informed. Medical care for treatment becomes important in such cases.

B. Education

The teacher will have to adjust such children in front rows so that they can read from the blackboard with ease. The child may be encouraged to glance out of the window now and then while reading from the blackboard. He will have to write in bold letters which are legible. The teacher may read aloud what he writes on the blackboard. Books with bold letters (18 point or more, if available) may be stored in the library to cater for the needs of these children. The District Rehabilitation Centres and hospitals may be approached for a hand lens, magnifying glasses, etc. for children whose correction is beyond the spectacle lens.

In order to reduce the reading load on the child with visual problems, such children may be given training in listening with comprehension. They may be provided in the time schedule for a radio broadcast and encouraged to listen. Wherever facilities are available, audio cassettes may be used. The State Institutes of Educational Technology, State Institutes of Education/State Councils of Educational Research and Training, and the Central Institute of Educational Technology, NCERT may be approached for cassettes in different curriculum areas.

The teacher should not accept different standards of behaviour from these children. They should be expected to clean up the work area just like other children. When they have acquired mobility, they should be sent on errands like their peers. Remind them gently to correct mannerism as soon as noticed. Provide opportunities for participation in physical education programmes. A bookstand may be arranged for partially sighted child.

Children with Hearing and Speech Impairment

A. Identification

Listening plays a significant role in communication and academic learning. Hearing problems interfere with the learning and performance of children. Children with hearing problems may also develop speech problems. It is, therefore, desirable to identify such children and take steps to meet their educational needs. For identification, salient observable behaviour displayed by such children is as follows:

-
- Has observable deformity of the ear(s)
 - Frequent discharge from the ear(s)
 - Complains of pain in ears frequently
 - Scratches ear(s) frequently
 - Turns head on one side to hear better

- Frequently requests teacher to repeat directions and questions
- Makes many errors in taking dictation
- While listening to the teacher watches his face carefully
- Displays speech difficulty

The child displaying some of this behaviour may be referred to the PHC or hospital for medical help. The parents also need to be informed.

B. Education

Children with hearing problems should be seated near the teacher for improved listening. The teacher may use a reasonable level of pitch while speaking. Avoid mumbling. Also avoid speaking too fast. While reading from the textbook, the teacher's lips should be visible to the children so that they may be able to supplement listening by lip-reading. Similarly, when speaking while writing on the blackboard, the teachers should face the students rather than speak with face towards the blackboard. For the same reason the teacher may avoid moving when speaking. Peers may be encouraged to interact with these children and help one another in learning. Additional visuals, individually or in groups, may be used to supplement general teaching input.

If speech disorder is due to an organic defect in the speech mechanism, medical help is required. Speech defects arising out of hearing problems can be corrected through speech training, using reinforced drill and practice.

Children with Low Mental Ability

A. Identification

Some children consistently show low academic achievement. They perform about two years below the level of performance of normal children. They may have no physical problem. They are also poorly adjusted in the classroom. Some observable behaviour for identifying such children is as follows:

-
- Displays poor academic achievement
 - Forgets learning after a short time
 - Is inattentive and distracted
 - Shows too much reliance on presentation of concrete objects
 - Seeks immediate reward
 - Displays fear of failure
 - Has poor self-image
 - Lacks in self-confidence
 - Has restricted communication
 - Has poor muscular coordination
 - Seeks repetition and practice

- Has difficulty in doing things for himself like eating, dressing, bathing and grooming
 - When the child is told to do something, he seems to have a problem in understanding what he has been told
 - Compared with other children of his age, the child appears dull or slow of manner
 - Compared with other children the child has difficulty in learning to do things
 - Has difficulty in understanding abstract things
 - Seeks more repetition and practice as compared to other children
 - Takes more time in learning a particular skill as compared to other children
 - Avoids participating in classroom activities as other children of his age do
 - Shows too much dependence on concrete examples
-

B. Education

The teacher has to provide concrete experiences for these children. These experiences can be provided by standard material available or improvised by the teacher. Direct experiences of the environment may be provided by field trips.

These children require repetition and practice more than other children. The learning task has to be presented in small steps. Their attention needs to be drawn to important points of the learning task. While learning, simple questions may be asked to give them a feeling of success. Immediate reward should be the watchword for these children.

These children need to be provided with training in communication skills through practice in social situations. The teacher plans activities in which these children participate in groups along with their peers. These children should be encouraged to use their learning in these situations as many times as possible.

Curriculum for these children has to be transacted through simple and interesting learning experiences. For this purpose, mastery of basic skills in the three Rs becomes essential. Special efforts will have to be made to keep these children absorbed as they have a short attention span. Activities will have to be varied in order to sustain their attention.

Children with Learning Disability

There are children who are above average in intelligence. They do not have a hearing or visual impairment. But they have specific learning problems in reading, writing, spelling or arithmetic. For example, some children always read and write 'b' as 'd', 'was' as 'saw', '21' as '12'. These problems are due to impairment of their psychological processes, like perception and memory. Such children are said to have a learning disability which arises out of the problems in psychological processes. These children need to be identified to provide special help in education.

Identification

Learning Disability

- Does not read well although his oral answers are intelligent
- Makes mistakes in spellings, especially omits letter in words or changes their place e.g. 'pat' instead of 'tap', or 'felt' as 'left', 'rember' in place of 'remember'
- Writes numbers wrong e.g. '12' as '21'
- Acts distracted and cannot remember his timetable
- Is always untidy and late in submitting homework and coming to class
- Does not do well in examination although he is clever and has no physical disability
- Is so excited that he is unable to complete any task
- Omits words or lines in reading
- Reads individual letters in the words but has difficulty in putting the sounds of the letters together. For example, he may sound b/e/g and say 'Bad' or sound f/o/g but say 'frog'.
- In reading guesses the word
- Reads the numbers wrong—'6' as '9' and '3' as '8'

Consolidation

You listed the ways in which you have been dealing with learning problems of children with special needs arising out disability. You listed the action that can be taken in activity sheet 3. You have just now studied what some other teachers and professionals have suggested on the basis of their experience with such children. Would you like to revise the list of actions that can be taken to improve the learning of these children in your classroom. You may review your earlier suggestions and complete the activity sheet.

Activity Sheet:

Review of Activity Sheet-3

Children with

Action for Dealing with Special Need Children

Locomotor disability

Visual impairment

Hearing and speech impairment

Lower level of mental abilities

Learning disability

National Resolve

Children with learning problems arising out of disability are potential dropouts. The goal of education for all can be achieved only when they are provided with special help in learning to prevent their failure and consequent dropout children with disability who do not come to school, are to be enrolled. It is important to develop self-confidence, so necessary for integration in the community as equal partners. The NPE 1986 resolves to achieve this goal through

- (i) Wherever it is feasible, the education of children with motor handicaps and other mild handicaps will be common with that of others.
- (ii) Special schools with hostels will be provided, as far as possible at district headquarters, for severely handicapped children.
- (iii) Adequate arrangements will be made to give vocational training to the disabled.
- (iv) Teacher training programmes will be reoriented in particular for teachers of primary classes, to deal with the special difficulties of handicapped children; and
- (v) Voluntary effort for the education of the disabled will be encouraged in every possible manner.

The NPE programme of action stipulates that only those disabled children whose educational needs cannot be met in general schools may be educated in special schools. Even those who are admitted to special schools, as they acquire the power of communication, self-help skills and basic academic skills, may be brought to general schools, if possible. It implies that such children will be educated in general schools. So, each teacher should learn to deal with the education of such children in common with other children.

Follow-up

The identification checklist provides information to the teacher that the child has a problem in some area due to a particular disability. It is only an indication. It has to be confirmed by specialists to whom these children are referred to. Besides confirmation, the specialists will also diagnose the functional level of the child which will provide to you plan specific steps for effecting learning in these children. You will have to learn more about the educational needs of these children. You can read more about it in:

1. Sharma, PL, and Jangira, NK, *Book for Training of Hearing-Impaired Children*, NCERT, Delhi, 1987
2. Mukhopadhyaya, S; and Jangira, NK *Source Book—Training of Teachers of Visually Impaired*, NCERT, Delhi, 1987.

3. Jangira, NK and Mukhopadhyaya, S; *Planning and Management of IED Programme*, NCERT, Delhi, 1987
4. *The Primary Teacher*, Vol. 12, No.1, January 1987 (Special issue brought out by NCERT)
5. *Bharatiya Adhunik Shiksha*, Vol.5., No.1, July, 1987 (Special issue brought out by NCERT)
6. *Communication: Equal Education Opportunity for the Disabled*, quarterly PIED Newsletter from NCERT
7. Sharma, P.L.: *Handbook on IED for Primary School Teachers*, NCERT, Delhi (in press)
8. Material produced by National Institutes for the Handicapped.

For further information, please write to:

1. Professor, Special Education, NCERT, Sri Aurobindo Marg, New Delhi-110016.
2. Officer Incharge, IED Cells in the State Councils of Educational Research and Training/State Institutes of Education.
3. Officer Incharge, Special Education in
 - (a) National Institute for Visually Handicapped, 116, Rajpura Road, Dehradun-248001.
 - (b) National Institute for Mentally Handicapped, Manovikas Nagar, Bowan Pally, Secunderabad-500011.
 - (c) Ali Yavar Jang National Institute for Hearing Impairment, Kishan Chand Marg, Bandra Reclamation, Bandra (W) Bombay-400050.
 - (d) National Institute for the Physically Handicapped, BT Road, Bonn Hughly, Culcutta.

Keep in touch with developments in education of the disabled. Children, parents need your help in developing these children as a human resource, just like any other child.

Feedback

Read the following and tick (✓) against the alternatives which you consider to be the most correct choice.

1. The child with locomotor problems should be seated in the right-hand corner of the classroom, because:—
 - (a) he can better interact with the teacher
 - (b) movement of other children does not interfere
 - (c) he can see the blackboard properly
 - (d) he can go out of the classroom easily
2. The first step in dealing with the disabled child in the classroom is:
 - (a) his referring to him to appropriate agencies
 - (b) diagnosis of his learning problems

- (c) identification of the disability
 - (d) making special arrangements in the classroom
3. Impairment refers to:
- (a) any form of organic disorder or dysfunction
 - (b) loss or reduction of function
 - (c) difficulty in performing activity
 - (d) a restriction imposed upon an individual which affects his functioning.
4. Disability refers to:
- (a) abnormality of some part of the body
 - (b) loss or reduction of functional activity resulting from impairment
 - (c) loss of body part resulting from an accident
 - (d) dysfunction of some body parts
5. Parent involvement in meeting educational needs of the disabled child is essential because:
- (a) they require special attention.
 - (b) they have to manage disability at house
 - (c) they have to arrange for medical help
 - (d) they provide support to educational efforts at school
6. The regular teacher should be aware of the disability because:
- (a) it interferes with the child's learning
 - (b) he can serve society better
 - (c) it will improve his teaching
 - (d) it improves understanding of the self
7. The teacher can help the child with lower mental ability by:
- (a) diagnosis of his problems
 - (b) referral to special schools
 - (c) sending him to a special remedial class
 - (d) providing concrete learning experiences
8. To meet the educational needs of the hearing impaired child in the regular classroom, the teacher has to face student while speaking so that:
- (a) the social distance between teacher and student is reduced
 - (b) the students remain under control
 - (c) the students can listen better,
 - (d) the students can lip-read
9. Learning disability is because of:
- (a) low intelligence
 - (b) poor socio-economic background
 - (c) damage to psychological processes
 - (d) physical injury

10. Learning disability refers to specific problem in:

- (a) all academic areas
- (b) reading and writing
- (c) reading, writing and spelling
- (d) reading, writing and arithmetic

Key to Feedback Questions

1 (b) 2 (c) 3 (a) 4 (b) 5 (d)
6 (a) 7 (d) 8 (d) 9 (c) 10 (d)

Learner-Centred Approach

The NPE-86 has recognised that “a human being is a positive asset and a precious national resource which needs to be cherished, nurtured and developed with tenderness and care, coupled with dynamism” (NPE-86, p.2). The policy has also emphasised that “each individual’s growth presents a different range of problems and requirements, at every stage—from the womb to the tomb”, implying that an individual’s individuality and dignity should be respected, and his needs, interests, aptitudes and abilities taken into account by the educational system (NPE-86, p.2).

To educate the coming generation that will have the competency to tackle its problems creatively, with confidence and determination, and with a commitment to human values and to social justice, the Policy has advocated “a child-centred and activity-based process of learning” (NPE-86, p.11). In this module some guidelines have been suggested to facilitate understanding and adoption (or adaptation) of the child-centred approach to teaching-learning situations.

The child-centred approach to education (also known as learner-centred or person-centred) has assigned the teacher a changed role of a facilitator of the learning process and an organiser of the learning situation to “stimulate curiosity and independent thinking, develop problem-solving skills, promote planning and execution of projects and self-learning involving acquisition of knowledge through observation of phenomena, creative thinking and activities” (National Curriculum for Primary and Secondary Education—A Framework 1987, p.6).

Let us examine whether the teaching method followed by you enables the child to develop the above listed characteristics:

Activity No. 1

What are the teaching methods and strategies you have been using?
Write them out on a separate sheet

Collect
Collate
Discuss

Now that you have listed the methods that you have been using, let us look at these from the angle of whether these methods and strategies have had their focus on a learner-centred approach or ‘teacher centred approach’.

Even before this let us discuss what we mean by a learner-centred approach.

Activity No. 2

What do you think is meant by a 'learner-centred approach' in the classroom situation?

Collect
Collate
Discuss

As we have gathered from the discussion, the 'learner-centred approach' means that the 'learner' or, 'child', and not the 'teacher' is the main focus of the educational programme. The curriculum, according to this approach, should be based upon the needs, interests, aptitudes, and abilities of students at different levels so that it enables the learner to acquire the necessary skills, knowledge, attitudes and values which will help him realise his full potential.

The overall goal of education, according to this approach, should, therefore, be the all-round development of the child, and not only that of acquiring knowledge. When we say 'all-round development' of the child, what does this really mean?

Activity No. 3

Can you list the different aspects of development which the curriculum should cover?

Collect
Collate
Discuss

Yes, as Mahatma Gandhi said, "by education I mean all-round drawing out of the best in child and man-body, mind and spirit". The curriculum should therefore, cover all aspects—knowledge, skills, attitudes, physical health, moral and spiritual values, aesthetics and work experience.

Now that we are clear about what is meant by the learner-centred approach, let us return to Activity No. 1 and think about the methods and strategies you have generally used so far. Do they indicate a 'learner-centred approach' or 'teacher-centred approach'?

Activity No. 4

Write down in a few sentences whether your approach has been 'learner-centred' or 'teacher-centred' and give your reasons.

Collect
Collate
Discuss

Generally, the approach of most teachers so far has been more 'teacher-centred' than 'learner-centred'. The present approach, as we all know, mainly emphasises attendance in school and ability to memorise and reproduce facts, e.g. the teachers teach straight from the prescribed textbook and the students are expected to answer questions in the same words as in the textbook.

The learner-centred approach, on the other hand, means that there should be a shift in emphasis from the 'teaching process' to the 'learning process'. This means that the focus should be on developing the skills of 'learning to learn' i.e. skills which will enable them to learn on their own and be able to face the demands and challenges of the ever-increasing flow of knowledge.

Do you think this approach will in any way affect your role as a teacher?

Activity No. 5

Write down in a few sentences what you think will be the ways in which the teacher's role will change

Collect
Collate
Discuss

As we have discussed, this approach means a definite change in the role of the teacher. The traditional or existing role of a teacher is that of a person who imparts content and knowledge to students. The role of teachers in the proposed approach will be that of a 'facilitator or guide' who should be able to provide the right kind of learning experiences and environment to children with which they will, through active interaction, develop the basic skills of observation, collection of information and drawing of inferences and conclusions. These skills will enable them to learn on their own.

Let us take an example. If the students of Class III have to be taught a lesson in science on 'parts of a plant', it can be done both according to the 'teacher-centred approach' as well as the 'learner-centred approach'.

Activity No. 6

Write in two separate columns a description of how this lesson can be taught according to the two approaches.

Collect
Collate
Discuss

As you must have thought yourself, this lesson should not be taught merely by describing different parts of a plant in the form of notes. Instead, the teacher should be able to arrange for children to see and handle, some plants themselves, make and note their observations systematically and, with the guidance of the teacher, 'discover' for themselves what the different parts of a plant are.

By 'discovering for themselves' the children's skills of observation and analysis are sharpened and they can apply these skills to many more situations and thus expand their knowledge. On the other hand, the teacher, by giving notes, is able to impart only limited knowledge to the children.

As you will agree, the existing teaching methods of lecturing, providing notes and summaries, dictating model answers and imparting knowledge to be reproduced on demand need to be discouraged.

When we talk of the change in the role of the teacher, let us think about this from another angle. What can the teacher do for the all-round development of the child? Let us take two other aspects of development—social and emotional.

Activity No. 7

Mention briefly how the teacher can contribute to the children's social or emotional development.

Collect
Collate
Discuss

We do realise that the teacher has an important role to play in promoting other than intellectual aspects of development in his students. To foster social development of children, the teacher should plan activities for students which will make them learn to work and play together. An example: a Class III teacher could introduce the lesson on "Different Habitats of Animals" in Environmental Studies by dividing the class into three groups and asking each group to prepare a project on one of the three themes—"Terrestrial Animals", "Aerial Animals" and "Amphibians". This strategy would foster in children the spirit of sharing and cooperation as they work on a joint venture.

Similarly, consider the emotional aspect. The teacher's positive attitude towards the children would encourage them and motivate them to further achievements. Punishment and a negative attitude, on the other hand, can cause severe harm to the child's self-image and affect his school performance too.

Another aspect that we must consider is evaluation of students. Do you think the examination methods should remain the same, or that they too should change, according to this approach?

Activity No. 8

Mention briefly what you think are the ways in which the evaluation methods should change. Give reasons.

Collect
Collate
Discuss

As some of you have rightly observed, the main focus will not be on memorisation of facts in this approach. It will be rather on 'development of competencies' in regard to all aspects of child development. The evaluation will also have to be done in terms of attainment of competencies rather than of knowledge e.g. one of the competencies listed for Class 1 and 2 for language-teaching is that the child should be able to read meaningfully the different combinations of letters as words. A reading test should not, therefore, be taken by merely making the child read a lesson from the textbook, which may have been read often in the class and which the child may have memorised, but by giving new material by which competence can be clearly evaluated.

Also, evaluation will have to cover all areas of development—knowledge, skills and competencies, social and emotional development as well as work experience. Unlike the present system of report cards indicating evaluation only in terms of marks or percentages for each subject, the periodic evaluation should also include a qualitative assessment of dimensions like sociability, leadership, ability to work with others, self confidence etc. It should also include a column on the child's positive strengths or attributes as well as one on problem areas, if any. These would indicate where the child needs special attention or encouragement, in terms of his overall development. Examination methods will therefore include, besides written tests, oral performance, observation techniques of evaluation and use of cumulative records. Evaluation will be done not merely for the purpose of ranks and grades e.g. to identify children who stand first, second and so on, but will be done with respect to the learner himself i.e. his

performance will be compared not with the performance of others, but with his own earlier performances. This will help in noticing improvements in his learning. It is also essential here to bear in mind that every child is unique and has his or her own strengths and weaknesses. Children should, therefore, never be compared with one another because that would only humiliate them and worsen their performance instead of improving it.

Let us also discuss the learner-centred approach in terms of the curriculum. When we talk of the learner-centred approach, does that mean that there should be different curricula for children from different regions since it has to be based on their needs and characteristics? How does the idea of a 'core elements of curriculum' fit in with this line of thinking?

It is true that children's needs and characteristics must be borne in mind. Therefore while the 'core elements of curriculum' are common and compulsory for all, the flexibility or differences will be in methods and materials which will be followed in transaction of the curriculum i.e. translating it into actual teaching in the classroom situation. These are likely to differ from region to region, depending on local needs and culture e.g. the core elements for Class I for language teaching in terms of essential learning outcomes will be the same for, say, Bihar, Rajasthan, and Delhi, but the learning materials i.e. stories, poems, books and charts used by the teachers to help the children achieve the outcomes, may differ from one state to another.

To sum up:

Activity No. 9

What do you think the goal before every teacher should be?

Collect
Collate
Discuss

As you yourself know, at present most teachers are concerned only with completing the course. Instead of this, according to the 'learner-centred' approach the goal of every teacher should be to make sure that every child in the class has attained the prescribed 'essential learning outcomes' for that class, for all the subjects. The teacher should not worry about 'completing the course' as he is expected to do at present, but should make use of a variety of available materials and methods to make sure that the essential learning outcomes have been attained by every child. He/she should also plan evaluation in the same way.

Let us consider the learning characteristics of the child at the primary, upper primary and secondary stages of schooling. These will have to be incorporated in designing appropriate learning experiences for children at different stages of development.

Primary Level

- a. For primary students a major way of learning is through imitating the be-

haviour of others.

- b. Verbal skills are not highly developed in children; therefore learning is enhanced if there is opportunity for physical activity.
- c. Primary level students understand only those concepts which are represented in their immediate environment.

Upper Primary Level

At this stage of development students are in a transitional role between childhood and adolescence. Some of the major learner characteristics of this stage include:

- a. Students will be at quite different levels of development, with boys lagging behind girls.
- b. Individual students will change very rapidly during this period.
- c. Students will have ambivalent feelings about whether they want to be treated as children or adults.

These characteristics point to the fact that, within the total group, as well as within the individuals, there will be great fluctuations in behaviour.

In developmental needs, the above characteristics of primary and upper primary learners may be interpreted as follows:

- (1) They are relatively unstable; therefore, need the stability and consistency of relationships with understanding adults.
- (2) They lack first-hand knowledge of the 'real' world; therefore, need experiences that will supply this knowledge both directly and vicariously.
- (3) They have lacked the opportunity to test their capacities in a variety of demanding situations: therefore, need opportunities to explore and try out their emerging potentials.
- (4) They tend to lack the security of self-confidence: therefore, need successful experiences which will tend to build self-assurance into the developing personality.
- (5) They have developed many questions, even anxieties, about themselves and their place in the scheme of things: therefore need an array of relationships, both adult and peer, and experiences which will enhance their search for answers.
- (6) They find (specially at the upper primary level) heterosexual relations very unsatisfactory because of maturational differences between girls and boys at these ages: therefore, need sensitive adult guidance in thinking through the concerns and anxieties that develop from the condition.
- (7) They are characterised by rather hostile attitudes towards any restrictions which as children they accepted: therefore, they need opportunities to release or manage these hostilities in a non-punitive and understanding atmosphere.
- (8) They have as yet not developed a sense of identity: therefore, they need a wide variety of experiences which will help them to become more aware of who they are, how they relate to others, and how their peers perceive them.

Secondary Level

The secondary level signifies the completion of an educational, as well as a developmental-maturational unit. At the end of this stage the individual is expected to assume the responsibility for deciding the direction of his future personal and vocational life. The immediacy of needs, the multiplicity of potential directions to choose from, and the forcefulness of pressures exerted upon the individual during the secondary stage can result in productive meaningful decisions, on the one hand, or confusion and distress on the other. From the point of view of both the individual and the society, it is at secondary level that educational, personal and vocational guidance assumes a significant and unique role. This role is not confined to assisting the students to make decisions that will lead to productive careers; it also involves assessing the usefulness of educational programmes in terms of preparing youth for facing life and being able to become productive individuals within their society.

Owing to the complexity of our economy, as well as our environment, both physical and social, a student who is awaiting his results at the end of the 10th or +2 stage can be seen standing at a multi-directional crossroads. Both our labour market and our educational system offer a multiplicity of avenues, opportunities and options. Individuals, on the other hand, possess varied interests, preferences, abilities and values, the combination of which may be suitable for a variety of occupations. Consequently, the major concerns at secondary level are:

1. Helping each student to become aware of his interests, needs, abilities and values, especially those related to his future life.
2. Assisting students to make decisions, or providing them with opportunities for decision-making. This involves both short and long-range benefits. Although the most immediate need at the secondary level is to make a specific decision about where to go next, the practice involved in making such a decision can be advantageous for making later decisions. The student becomes aware of the need to investigate and weigh information before embarking on a certain programme of action. This long-term benefit also relates to another major learning goal—assisting students in acquiring both information and practice which eventually result in long-term planning. Our labour market and technology are undergoing almost continuous development and change. Thus, it has become increasingly necessary to plan not for a single career, but rather for a series of positions within one's work-span. The ability to plan for the future can be seen as an important "tool" for the individual, especially at the secondary level, when the first phase of a career is imminent.
3. Developmentally and maturationally the secondary school student possesses adequate verbal and conceptual skills. Therefore, learning at this stage can be achieved through a variety of methods, including distance learning methods.
4. At this level, students also need assistance to deal with external pressures that are directed towards him from various sources. Therefore, they should be assisted to deal with the emotional aspect of the pressure, that is, feelings of

frustration, helplessness, insecurity and so on. Assistance should also focus on certain aspects of career guidance that would eliminate the pressures. Thus, opportunities should be organised for students to acquire non-technical skills, employability skills such as interview skills, adjustment to supervision, peer relations and so on. Such experiences could potentially facilitate work adjustment and increase satisfaction. To examine whether learning has occurred in students as a result of the learner-centred approach to the educational process, you may ask yourself the following questions:

- (1) Has the learning experience organised by you assisted students to gain knowledge on the subject and have they utilised the knowledge gained in new situations?
- (2) Have certain skills been extended or refined?
- (3) Do you have evidence of new interests and attitudes that students would have acquired as a consequence of your effort?
- (4) How has the learning experience provided by you helped the student to evaluate his own learning?

Thus, in the learner-centred approach you accept students as they are. You should allow them to express their feelings and attitudes freely without condemnation or judgement, plan learning activities with them rather than for them, and create a classroom atmosphere relatively free from emotional strains and tensions. The climate for learner-directed learning is not the result of any one kind of teaching practice. It is here that you can utilise your creativity to generate learning opportunities suited to the needs and aspirations of learners in your charge.

You may wish to know how to develop the educational climate discussed above. The answer is two-fold. First, a permissive and understanding climate, which respects the self and the purposive individuality of each student. It can be developed only insofar as you hold a philosophy which is consistent with these elements. In the second place, you will have to implement this approach to teaching from the beginning in your work with the class. Since the experience will run almost directly counter to all the previous educational experience of the student, careful thinking will have to be done for the technique to be used.

It is important that the motivation of students should be kept foremost in mind. The class may be started with a description of the problems the students are facing or with a discussion of the general problem areas. As problems are often stated hesitantly, they have to be accepted simply. The attitudes connected with them have to be clarified. Gradually issues arise out of these problems, and the class is embarked upon its own curriculum transaction.

For students who have, from one to eight or ten years, experienced a class as a passive experience, such an opening of learning activity is at first puzzling, then downright frustrating. Negative feelings, often very strong ones, are aroused. At first they are not expressed because one does not "talk back to" or correct the teacher; but

as tension mounts, some bold student bursts out with: "I think we are wasting time; I think we ought to have an outline, and follow it, and that you ought to teach us. We came here to learn from you, not to discuss among ourselves." When negative attitudes such as these are understood and accepted, students begin to recognise the climate that exists. Some may not like the procedure, may heartily disapprove of it, but everyone recognises that this is a very different situation from that existing in ordinary classrooms.

Frequently the teacher, who is considering experimenting along the lines discussed above, believes that he cannot undertake it, that because he must use an assigned test or because his class must pass the same examination as classes taught in a conventional way, he is responsible for seeing that his class covers a prescribed syllabus each week or in each term. These points will illustrate the primary importance of the teacher's attitudes. If, for example, this class must meet the same examination as other sections, the teacher's attitude, would change. He would like the course to be the student's course in order to motivate them. There is one limitation which is imposed upon the teacher as well as the students i.e. the examination which every class must take at the end of the course.

In brief, every group has some limitations. It is not the limitations, but the attitudes, the permissiveness, the freedom which exists within those limitations, that is important. Within the limitations that are imposed by circumstances and authority, or by the teacher himself an atmosphere of permissiveness, of acceptance, of reliance upon student's responsibility, can be created.

In behavioural terms, your role as a teacher may be operationalised as follows—

- setting the mood or climate of the group experience by your own basic philosophy of trust in the group, which is communicated in many subtle ways,
- help to elicit and clarify the motivations of the members of the class, accepting all aims,
- rely upon the student's desire to implement these motivations as the force behind learning,
- endeavour to organise and make easily available all resources which the students may wish to use for their own learning,
- regard yourself as a flexible resource to be utilised by the group in the ways which seem most meaningful to them, insofar as you can comfortably operate in these ways,
- accept both the intellectual content and the emotionalised attitudes, endeavouring to give each aspect the approximate degree of emphasis which it has for the individual, and the group,
- as the acceptant classroom climate becomes established, you can change your role and become a participant, member of the group, expressing your views as those of an individual only.
- remain alert to expressions indicative of deep feelings and when these are

voiced, you may endeavour to understand them from the speaker's point of view,

- likewise, when group interaction becomes charged with emotion, maintain a neutral and understanding role, in order to give acceptance to the varied feelings which exist,
- recognise that the extent to which you can behave in these differing fashions is limited by the genuineness of your own attitudes.

Training Pupils in Developing Inquiry Skills

Overview

Children are curious by nature. They ask many questions about the objects they see, natural phenomena they experience and social events they encounter as they grow. They ask questions primarily to explore the environment and to understand it. Children have an inquiring mind. Given the opportunity, their inquiry skills sharpen as they grow. These inquiry skills help their optimum personal growth and development. They make them productive members of society. At the root of each progressive step lies an inquiring mind. It is, therefore, essential that teachers should provide an opportunity for each child to inquiry-skills building, their primary urge to inquire, to explore, to create.

The National Policy on Education—1986 and the Curriculum Framework for Primary and Secondary Education developed by NCERT stress the need for cultivating pupils for inquiry, independent learning and the scientific temper. There are several teaching methodologies for developing inquiry skills. This module presents one teaching methodology for developing these skills in children. It specifies procedures illustrated with teaching episodes. It can be used in teaching any curriculum area—social studies, science, mathematics, language and aesthetic arts. It is useful for all teachers.

While reading the module, you will be required to complete some paper-and-pencil activities. You will enjoy doing them. Don't skip them. Keep writing material at hand and prepare for reading with activity.

Objectives

On completion of this module, you will be able to

- give at least three arguments for specific teaching effort to develop inquiry skills in pupils.
- State at least two objectives of the teaching methodology for developing the inquiry skills outlined here.
- describe the steps of inquiry teaching in proper sequence.
- select appropriate themes for inquiry training from the curriculum area being taught by you.
- Plan inquiry training lessons for use of teaching.

Learning Activity (Individual Reading)

Let us examine a teaching episode from a teacher's experience. Read it carefully. You will have to answer a question at the end of reading.

Episode 1

Shanta's family had been away during the vacation. On their return they were shocked to see their garden destroyed. The creepers, which once went up to the walls, were lying on the ground. Hedges looked damaged. Several other plants were also badly damaged. The lock on the door was, however, intact. They opened the lock and entered the drawing room. Two big pictures were lying on the floor with glasses broken. Dust had settled on all the furniture. They looked towards the windows. The windows were closed. What could have happened? The question was written large on everyone's face. You may help Shanta's family by working out what might have happened to their garden and the drawing room in their absence during the vacation.

Here is the classroom interaction report in the teacher's diary.

"What might have happened?" asked the class teacher, Mr Joshi.

"There could have been children like us", reported another.

"Couldn't there have been a storm?" asked Meena.

"Why not develop possible hypotheses?" suggested Mr. Joshi.

"What might have happened, Sir?" asked another child.

"I can't answer. Make a guess yourself", said Mr. Joshi.

"Were there footmarks of stray cattle in the garden?" asked one of the children.

"No", replied the teacher.

"Was some pet left locked inside the drawing room?"

"No".

"Was something found missing?"

"No".

"Then the theft motive is ruled out", said one child.

"The storm motive is not ruled out", concluded one child.

"Was there a storm during this period?"

"Verify it yourself", suggested the teacher.

"Were the windows closed?"

"Yes".

(Looking up) "And the ventilators?"

"No."

"Here lies the truth. The strong wind might have entered through the ventilators and the pictures might have fallen."

"Can you check further?" asked the teacher.

"Did the news about the storm appear in the local newspapers during this period?"

"Yes."

"This confirms the earlier assumption."

There are several approaches to inquiry. Here one specific approach has been outlined. The pupils are helped to develop the attitude that all knowledge is tentative. Scholars generate explanations and theories. It helps the children to question, probe, test a hypothesis (intelligent guess) and formulate an explanation. The inquiry follows five steps.

An examination of this teaching episode reveals that when a problem-solving situation or a puzzling event is encountered, several possible explanations come to mind. In the beginning, pupils guess in the light of their experience and come out without explanations. Through a specific pattern of questioning (framing questions having 'Yes/No' answers) they collect more information and arrive at the criterion explanation, the explanation which is required by the teacher. It helps the children to develop logical thinking, scientific process skills like observing, collecting relevant information and data, organising information and data, identifying factors to be investigated, formulating a plausible explanation (hypothesis), testing the validity of the explanation in the light of the information collected and making inferences. The inquiry process also develops creative inquiry skills, and independent learning. Concomitantly, it promotes verbal proficiency in verbal expression. Based on reading this paragraph, you may formulate *objectives of the inquiry teaching*:

The objectives of inquiry teaching are:

1. To _____
2. To _____
3. To _____
4. To _____

Obviously, inquiry teaching is based on several *assumptions*. For example, it assumes that all knowledge is tentative. As new knowledge is generated, the explanation and solutions to problems change. The implication is that there cannot be only one answer to a particular question. It further assumes that human beings are curious by nature and inquiry skills may be sharpened through systematic teaching and training. It also assumes that the team approach (class or subgroups in the class) enriches the inquiry. That is why the team approach is better than individual approaches to find solution to problems. What do you think about these assumptions? Do you agree? Think about arguments supporting your view points.

My viewpoint about the assumption of inquiry approach is that:

Inquiry Procedure

As pointed out earlier there are several approaches to inquiry. In the inquiry approach one specific approach was used. Here the pupils are presented with a puzzling situation or a problem. After presentation of the problem or the puzzling event, the pupils are encouraged to ask the teacher questions in such a way that he answers 'Yes' or 'No'. The pupil is allowed to ask a series of questions at a time to pursue his line of inquiry. Initial questions asked by the pupils are usually exploratory in nature. Based on this information pupils formulate specific hypotheses (plausible explanations) based on relationships among variables in the problem under inquiry. Then they collect further information (data) through 'Yes' or 'No' answer type questions to test these hypotheses. This they do, either through verbal experiments to test if then is a causal relationship. In other words, they reach a final explanation. This way they develop a theory explaining the phenomenon under inquiry. Practice develops logical thinking and inquiry skills in the pupils. This process can be applied to the teaching of any curriculum area, be it social sciences, sciences or the humanities.

The inquiry approach involves five steps. These five steps are described in this section.

1. Encounter with the Problem

The teacher presents a problem or a puzzling event to the class. The presentation may be verbal or written on the chalkboard or on a worksheet. It can also be presented on an overhead projector slide. Depending on the availability of facilities, the teacher can select the mode of presentation. Presentation on worksheets provides sufficient specific information relevant to the problem to *each* pupil for reference in deciding his line of inquiry, or changing it with the demand of the inquiry process at different stages. If this facility is not available, it should be recorded on the chalkboard. The worksheet carries the essential facts about the problem.

The teacher first prepares the class and then presents the problem. With the presentation of the problem, the teacher explains the rules or procedures of inquiry to the students. The rules of procedure are:

- (i) The question should be phrased in such a way that they can be answered by 'Yes' or 'No'.
- (ii) Once called upon, a pupil may ask as many questions as he or she wishes before giving up the floor to other pupils. It is necessary because creative thinking takes time and requires continuity. He has to ask a series of sequenced questions to pursue his line of inquiry.
- (iii) The teacher does not answer 'Yes' or 'No' to statements on theories (explanation) that attempt to obtain the teacher's approval of a theory (proposed explanation) at any time.
- (iv) Any pupil can test a theory (proposed explanation) at any time.

- (v) The pupils can be allowed to consult and have a small group consultation if they like.
- (vi) If required in a particular situation, the pupils can be allowed to work with an experimental kit, idea books, or resource books, if they wish.

2. *Data Gathering (Exploration)*

The pupils retrieve from memory the necessary information for formulating a possible explanation (hypothesis) regarding the problem under inquiry. The teacher helps them in selecting relevant information through providing cues and reinforcement, as was done in the episode cited earlier.

3. *Data Gathering (Experimentation).*

The exercise of data-collection initiated at step (2) continues with the difference that, by isolating relevant factors (variables), the pupils formulate hypotheses (explanations), test these, and try to establish cause-effect relationship. In the process, the hypotheses can be revised as well, if the situation so demands, in the light of the data generated through deeper insight as the process of inquiry develops.

4. *Formulating an Explanation*

On the basis of step 3, viable explanation for the puzzling event can be formulated or a solution to the problem enunciated.

5. *Analysis of the Inquiry Process*

The pupils analyse the inquiry process adopted by them to examine its strengths and weaknesses. Answers to questions like the above—Was the approach taken by us the only one or could we have considered other alternatives? Which one of these alternatives is better? If so, in what ways? Will adopting the inquiry process help in seeking more effective ways of inquiry?—need to be sorted out. (This step was not covered in the teaching episode given above).

Episode 2

An episode is given below. Read and identify the steps covered in the episode?

In the mountains in Western India, there were numerous deer with minor fluctuations in numbers. There were also wolves in the mountains. Some people from a village witnessed a wolf pack pull down two of the small deer in the herd. The villagers felt horrified at the sight and thought that the wolves would destroy all the deer. So they launched a campaign to eliminate the wolves. But their hopes were belied. The years following the elimination of the wolves showed a marked decrease in the population of deer. Why, when the wolf is the deer's natural predator, should this occur?

Teacher: Can we get some information to answer this question?

Kireet: Have other animals been seen killing the deer?

Teacher: Yes, they have been.

Kireet: Different animals?

Teacher: Yes.

Sanjay: I have an idea, Sir.

Teacher: Fine, Sanjay (smiles), please wait till Kireet has finished.

Kireet: Does the prey-predatory balance have anything to do with the problem?

Teacher: Can you gather some data to support that?

Kireet: Yes, let me try. After the wolves were eliminated, other predators, such as leopards, tigers and large birds such as eagles were able to prey more successfully on the deer. So their population went down. Kireet appears to have finished. So the teacher turned to Sanjay.

Sanjay: I have another idea.

Teacher: Good, go ahead.

Sanjay: After the deer's predators were eliminated, the population expanded. So their habitat could not support them. They were thus led to starvation and their population went down.

Teacher: Right, can we gather some information to support your idea?

Kipu: Were more bobcats seen in the deer's habitat after the wolves were eliminated?

Teacher: No.

Kipu: How about tigers?

Sheery: Were numerous barkless trees found in the region after the wolves were eliminated?

Teacher: Yes.

Kireet: Before the wolves were eliminated?

Teacher: Yes.

Kireet: More after?

Teacher: Yes.

Kireet: Were the carcasses skinny?

Teacher: Some were, of course.

Vineet: Were the deer in the region male deer?

Teacher: Yes.

Kumar: Do eagles kill mature deer for food?

Teacher: Not really.

Pinki: Are the winters in the region quite cold?

Smith: Yes.

Teacher: Look at the hypotheses you have suggested and see how they fit the data.

Sudhir: I think the first hypothesis should be eliminated.

Teacher: Why, Sudhir?

Sudhir: The hypotheses suggested that other predators were the cause of the decline in the population but we have found that there was no increase in the population of leopards.

Teacher: Very good, Sudhir.

Pinki: (Raising hand excitedly) I think we need to change the second hypothesis a bit.

Teacher: Go ahead.

Pinki: We found that some of the deer must have starved because *emaciated* carcasses were found and the trees were stripped of their bark. We also found that some of the carcasses were *disabled*, which suggests that disease may have caused some deaths. I think the hypotheses should say that after the deer's predators were eliminated, their population expanded so their habitat couldn't support them and they became susceptible to starvation and disease. The wolves take the weakest members, and the herd as a whole keeps healthy.

Teacher: Fine, Pinki.

Alam: We do not know that the wolves do that. Were the deer carcasses found before the wolves were eliminated? Did they tend to be young or old or did they appear in the whole range of maturity?

Teacher: Yes.

Shah: That does fit then. That supports Pinki's idea about wolves taking the weakest members of the population.

The class was satisfied that the hypotheses was supported by the data.

Use of the Inquiry Training

Although inquiry training was originally developed for the natural sciences, its procedures can be used effectively in all subject areas. Social sciences offer numerous possibilities for developing problems which can be used for training in independent inquiry skills. In literature, mysteries and science fiction, stories are appropriate for formulating puzzling problems. In history, political science, economics and sociology, there are a number of problems which can be used as problems for inquiry.

The formulation of puzzling problems by a teacher is a difficult task, because he has to transform curricular content into problems to be explored by pupils. But it has been found that teachers, after being trained in the use of this content, throw in interesting and puzzling problems.

It is not necessary that the whole curriculum should be covered through this approach. However, we should provide sufficient opportunity to pupils to develop and master inquiry skills.

Consolidation Exercise

1. From the curriculum area you teach, select a puzzling problem that you would like to use for inquiry, prepare a fact sheet for pupils. Conduct the inquiry session with your colleagues as pupils.
2. From a mystery story of the curriculum area you teach, formulate at least two problems that you would use for inquiry training with your class after returning from the training programme.

In order to know to what extent we have understood the inquiry training model, we should try to answer the following questions:

1. Which of the following is not *true* for Step 1, that is, encounter with the problems.
 - (a) The pupil should phrase 'yes' 'no' type questions.
 - (b) The pupil can ask as many questions as he wishes when he has been called upon to do so.
 - (c) The pupil can test any explanation at any time during the inquiry.
 - (d) The pupils cannot confer with one another.
2. Collecting data about a single event is called:
 - (a) Testing conditions.
 - (b) experimenting.
 - (c) verifying.
 - (d) explaining, on the basis of the data.
3. If the pupil, says, "saturated fat is better than unsaturated fat", he is
 - (a) verifying a condition.
 - (b) theorising.
 - (c) hypothesising.
 - (d) isolating a relevant variable.
4. If the pupil states exactly how the pressure affects the boiling point of water, he is
 - (a) experimenting.
 - (b) observing.
 - (c) collecting data.
 - (d) summarising.
5. If the pupil states on the basis of his observation, "Beautiful parents always have beautiful kids" he is
 - (a) hypothesising
 - (b) isolating a relevant variable.
 - (c) theorising.
 - (d) verifying condition.

Key to Evaluation Question

1.(a) 2.(e) 3.(b) 4.(a) 5.(a).

Value-Oriented Education

Introduction

"The growing concern over the erosion of essential values and an increasing cynicism in society has brought to focus the need for readjustments in the curriculum in order to make education a forceful tool for the cultivation of social and moral values," observes the National Policy on Education, 1986 (NPE).

This is not the first time that concern has been expressed about the decline in the standards of moral and social life of our people and attention drawn to the role of education in fostering a sense of values. Several Committees and Commissions on Education that have deliberated on the different aspects of our education ever since we became a free nation have pointed to the need for value education.

There can be no two opinions that education as an organised social system has an important function in the development of moral, spiritual and aesthetic values. Nor can anyone deny that we, teachers, have a significant role to play in the realisation of this objective. But if we are to be effective in the sphere of value education, we should first be clear in our minds about the *What*, *Why* and *How* of it. We attempt to present such understanding to you in this module.

Objectives

This module has been designed to help you

- understand the relationship between education and values
- appreciate the need for value education
- understand the objectives and scope of value education in schools
- get acquainted with the common core values recommended in the NPE
- identify the different sources of value education
- appreciate the complexity of the process of value education
- understand different approaches to value education
- understand your role as a teacher with regard to value education
- plan appropriate learning experiences for children to develop values.

Value and Education

Let us begin by asking what values have to do with education. Values refer to objects that we human beings cherish and desire, and consider *desirable*. These may be material

things (house, food) or abstract qualities and ideals like truth, happiness, peace. Education, as you know, is a process of bringing about desirable changes of behaviour in the learner—in the way he thinks, feels and acts in accordance with our concept of good life. In other words, it is a process of developing in the child knowledge, skills, attitudes, values and behaviour patterns that we consider desirable for him to have, both as an individual and as a member of society. The various goals and aims of education—development of human resources, creativity, commitment to human values and social justice, national cohesion, scientific temper and independence of mind and spirit, socialism, secularism, democracy—are no more than educational expressions of our concept of the good life. To realise these aims, we design a curriculum, and curriculum is nothing but a planned and organised collection of desirable experiences—knowledge, skills and attitudes—from out of our accumulated cultural heritage. You will, thus, see that education, in its aims, curriculum and methods, is inseparably bound up with values. Even more, it is through education that society seeks to preserve and promote its values.

Activity Sheet No. 1

- | | |
|---|-------------------------------|
| <ul style="list-style-type: none"> (i) How do values appear in methods of education? (ii) How do you describe your ideally educated youth for modern times? (iii) What should our education seek to develop in our children? (qualities of mind and heart, habits, skills) (iv) Do you accept indoctrination or propaganda as education? If not, why not? (v) All education, in a sense, is value education. Discuss | Collect
Collate
Discuss |
|---|-------------------------------|

Need for Value Education

If values are woven into the very concept of education, as we have discussed, what is the point (or even meaning) of value education?

It is, of course, true that all good education is, in essence, a process of developing the human personality in all its dimensions—intellectual, physical, social, moral and spiritual. But for a variety of reasons, the effective dimension of personality has in recent times been seriously neglected in our education. Education today has degenerated into a process of information-transmission with, for its sole objective, passing examinations. When we, therefore, talk of value education, we wish to draw attention to the effective objectives of education—the development of the social, moral, aesthetic and spiritual sides of man's personality—which have been undermined.

Second, we are passing through a phase in our social and political life which poses

a special danger in the erosion of long accepted values. The goals of secularism, socialism, democracy and professional ethics are coming under increasing strain. There exists a schism, as a NPE observes, between the formal system of education, and our rich and varied cultural traditions. The preoccupation with modern technologies should not be allowed to sever our new generation from their roots in India's history and culture. Deculturation, dehumanisation and alienation must at all costs be avoided. Forces of social and national disintegration have become active, putting our democratic society to its severest test. The population increase has seriously affected the quality of life of the masses and has caused social tensions and unrest. Crime, violence and indifference to human suffering have spread to all walks of life. Prejudices and complexes transmitted through the social environment and the accident of birth are hindering the promotion of equality. Our physical environment—rivers, mountains, forests, plant and animal life—is growing increasingly polluted, and depleted of its resources. This poses a serious threat to our quality of life. Narrow casteist, communalist, linguistic and regionalistic outlooks are dividing our people and coming in the way of our developing a unifying national and international outlook. The world today faces a catastrophe, threatened with global nuclear holocaust. As never before in the history of mankind, we are in need of peace and international understanding. All these problems cannot be effectively tackled through narrow piecemeal efforts, educational or social. What we need is a drastic change in the very outlook of man, in his own life values and his environment. This calls for a deliberate thrust on values in our education.

Activity Sheet No. 2

- | | |
|--|---------|
| (i) Do you think that the affective objectives are being neglected in our education today? | Collect |
| (ii) How do you account for the increased incidence of | |
| (a) student indiscipline | |
| (b) violence | |
| (c) communal disharmony | Collate |
| (d) crime in our society? | |
| (iii) Do you think that there is a crisis of values in our society? | Discuss |
| (vi) Is an explicit emphasis on values in our education necessary? | |
| (v) Do you think that the current value crisis can be resolved through education? | |

Scope of Value Education

When we speak of value education, it is not our intention to suggest that one more

subject area by that name should be added to the school curriculum. We mean only that the development of proper values, attitudes, feelings and behaviour patterns which cut across all curricular experiences, instructional and otherwise, should be planned systematically and sincerely, implemented. Our goal is "education for becoming" rather than the mere transmission of facts and information or the mechanical training of skills. The problem here is to enquire into what is involved in such education and to understand its scope in school education.

- (a) The first thing to note about value education or education for becoming is that it involves all three faculties of our personality—knowing, feeling and doing. The child should be made aware of the right values, to feel the proper emotions and internalize values in thought and deed.
- (b) Certain values have to be developed as habits in the child e.g. cleanliness, punctuality and truthfulness. The rational understanding of values could be transferred to the state when the child is able to reason adequately. Value education should be related to the child's psychological readiness and experiences.
- (c) All the values that we have mentioned earlier viz., scientific temper, equality, environmental protection, democracy, secularism, are relevant to all stages of education, but the approach that we follow and the activities that we provide are different for different stages, according to the age and grade level of children. At the early stages, value education should be provided through concrete activities and life situations. At the later stages, the students should develop a rational understanding of the values and internalize them in thought and action. For this, again, we should provide appropriate opportunities for reflection and practice.

Generally speaking, the objectives of value education in schools may be stated as

- (a) developing the appropriate sensibilities—moral, aesthetic, cultural, spiritual—in children.
- (b) enabling the student to understand and appreciate the values of democracy, secularism, equality, and scientific temper.
- (c) enabling the student to develop a concern for, and commitment to them.
- (d) providing opportunities for students to practise and live by these values.

Activity Sheet No. 3

- | | |
|--|-------------------------------|
| (i) Should value education be a separate school subject? | Collect
Collate
Discuss |
| (ii) What objectives would be appropriate for value education at the primary stage? | |
| (iii) What objectives would be appropriate for value education at the secondary stage? | |
| (iv) What other values do you wish to see inculcated as habits in primary school children? | |

What Values should Education Foster?

What are the values that we wish to develop in our children? Before we make an attempt to list them, we should note an important point, that man exists not as a solitary individual living in a vacuum, but as an active member of a dynamic social group, society, nation, global community. The value education of a person should, therefore, be related to the specific social and cultural context in which he lives, and with reference to some universal and eternal standards, applicable to all mankind.

What are our social and national concerns today and what demands do they make on value education? The NPE says:

"In our culturally plural society, education should foster universal and eternal values, oriented towards the unity and integration of our people. Such value education should help eliminate obscurantism, religious fanaticism, violence, superstition and fatalism.

Apart from this combative role, value education has a profound positive content based on our heritage, national goals and universal perceptions. It should lay primary emphasis on this aspect."

According to the National Curriculum Framework, the universal values which we have referred to above have been best expressed in our constitution to which the Indian people as a whole owe allegiance, viz., liberty, equality, fraternity, democracy, socialism and secularism.

The idea of what values should be fostered through education has been best expressed in the concept of the common core in the NPE. The common core emphasises instilling a nationally shared perception and values and creation of an ethos and value system in which a common Indian identity may be strengthened. The common core will include the history of India's freedom movement, the constitutional obligations and other content essential to nurture national identity. The core elements will cut across subject areas and will be designed to promote such values as

- Our common cultural heritage
- Egalitarianism, Democracy and Socialism
- Equality of the sexes
- Protection of the environment
- Removal of social barriers
- Observance of the small family norm
- Scientific temper

Apart from these values, we would like our people to develop the values of secularism, international co-operation and peaceful co-existence, pursuit of excellence, equality and national integration.

Activity Sheet No. 4

- | | |
|--|---------------------------------------|
| (i) What, in your view, should be the core values of our education? | |
| (ii) Explain the values of scientific temper, democracy, secularism, equality. | |
| (iii) Offer your justification for the development of the following values: | |
| democracy | small family |
| secularism | scientific temper |
| socialism | removal of social barriers |
| equality of the sexes | peace and international understanding |
| concern for environment | |
| (iv) What are the values enshrined in our Constitution? What is their rationale? | |

Collect

Collate

Discuss

The Process of Value Education

The development of values is by no means a simple matter. There is no magic formula, technique or strategy for the inculcation of values. In fact, the process of value education is an extremely complicated process, influenced by a variety of hereditary and environmental factors. Without going into details, let us note a few general truths about value education:

- Value education in all its comprehensiveness involves developing a sensitivity to values, ability to choose the right values in accordance with one's conception of the highest ideals of life, internalizing them, realising them in one's life and living in accordance with them. It is not, therefore, a time-bound affair, but a lifelong quest.
- Development of values is influenced by a complex network of environmental factors—home, peer group, community, the media and society at large. Education as a sub-system of society only reflects the existing social order, but in periods of crisis it has to assume a more creative role and work towards setting things right. Schools, therefore, have an important function in the value education of children. But the extent to which schools function as training grounds for values depends on their physical conditions and the professional idealism of teachers among other things.
- Value education is complex in another sense. It calls into play all human faculties—knowing, feeling and doing. Not only should the child be enabled to know the right and good, but also to feel the appropriate emotions and exercise its will to do the right thing. In other words, value education covers the entire domain of learning: developing rational thinking, educating the

emotions and training the will—the cognitive, affective and psychomotor domains.

- (d) Children acquire values following a developmental sequence. Research in moral education has identified three distinct stages of development—the premoral stage, when the child acts with a view to avoid punishment and obtain reward; the stage of conventional rule conformity, when child behaviour is determined in terms of avoidance of disapproval/dislike of others; and the stage of moral autonomy when the child is guided in his behaviour by his conscience and the principle of respect for the rights of others. The important implication here is that our strategies and approaches to value education should match the developmental stage of the individual.

Activity Sheet No. 5

- (i) Give illustrations for the generalisations presented above.
- (ii) "If we know what is right, we will do what is right" Do you agree?
- (iii) What does 'education of the emotions' mean?
- (iv) "We not only want the students to do the right thing but also do it for the right reasons." Do you agree?
- (v) How do you account for the following in young and older children?
 - lying
 - stealing
 - cheating
- (vi) How do you enlist the cooperation of the home in the value education of children?
- (vii) How do you counteract the influences in the media hostile to the development of values?
- (viii) In relation to each value a child should have cognitive understanding, feel the proper emotions and exercise its will to practise it. Identify these knowing, feeling and willing components in respect of environmental consciousness, scientific temper and other core values.

Collect
Collate
Discuss

Sources of Value Education

There are several sources, and teachers have to make use of them judiciously.

First, the regular subjects of the school curriculum present themselves as potential reservoirs of values. Hidden in the structure and methodology of every discipline is a set of values, attitudes and dispositions which are characteristic of it. Science, for example, is associated with such values as free inquiry, commitment to truth, and mathematics with such qualities of mind as logical thinking, neatness and precision. In

a similar way, literature and history have their own distinctive values. The correct teaching of a subject involves not only transmission of the information contained in the subject, but even more importantly inducing in the learner the qualities of mind and heart involved in the pursuit of that discipline. This is not to say that the subject is to be overtly used as a *means* of value education. It is only to emphasise that good teaching of a school subject cannot be neutral to the values that are integral to it.

Co-curricular activities are another important source for the development of values in children. Student self-government in schools, the various clubs and associations, NCC, NSS Boy Scouts and Girl Guides, Red Cross, excursions and field visits, sports and games all provide opportunities for boys and girls to come together in the pursuit of common goals and ideals. Apart from developing their creativity and distinctive intellectual, social and cultural interests, students learn when they participate in these activities, the values of democratic living, responsibility, cooperation, tolerance and secularism. These activities provide experience in learning values through actual living. For the effective realisation of the value potential of these activities, they have to be organised democratically and with clearly defined objectives.

The very atmosphere of the school often radiates values. Tagore and Gandhiji laid great stress on the creation of a conducive atmosphere in educational institutions for the wholesome development of the child's personality. The school atmosphere may be described as the sum total of the influences generated by it, its setting, its traditions and ideals, the teachers, pupils and parents, in a word, the ethos of the school. Where high ideals guide the working of the school, where teachers work with a sense of dedication, where there is mutual respect, affection and love among all concerned—students, parents, teachers and the community, values are induced in the children. But it should be noted that such an atmosphere is built up over a period of time and is the result of the cooperative and collective efforts of students, teachers and parents. Great educators were able to create such an atmosphere in their institutions by their own personal example and hard work.

Activity Sheet No. 6

- (i) Identify any other sources of value education.
- (ii) Identify the values that you think can be developed through the teaching of history and languages.
- (iii) Identify teaching episodes (an incident in history, events in the lives of great men, current social and political events) that you can use for the development of values of democracy, secularism, scientific temper, equality of the sexes, dignity of labour.
- (iv) List the various factors that collectively make up the school atmosphere.
- (v) Design a student project for developing
 - environmental consciousness
 - respect for our cultural values
 - peace values

Collect
Collate
Discuss

(vi) Suggest teaching-learning activities to combat

- superstition
- prejudice
- a fatalistic attitude

Approaches to Value Education

Value education can be provided directly, indirectly or incidentally. Direct value education refers to deliberate, systematic instruction in values in specially provided periods in the school time-table. In many states moral education is imparted in this manner. In this approach, the values to be inculcated are explained, discussed and illustrated through stories and fables, anecdotes, moral dilemmas, real life events. Indirectly, value education can be imparted through the regular subjects of the school curriculum and co-curricular activities. Value education is incidental wherever it is resorted to, in relation to a specific event or situation that actually occurs in the school, for example, an act of courage and bravery by a student, an act of indiscipline and moral failure e.g. theft, dishonesty. The event may be one to be emulated or disparaged.

Each approach has its strengths and weaknesses. They must be used judiciously always, bearing in mind the maturity level of the learner and the interplay of head, heart and will be involved in the process of value inculcation. Since education '*in becoming*' involves the whole person, a variety of activities and strategies have to be employed by the teacher. These include:

- teaching, instruction, explanation, discussion (to foster the cognitive understanding of the moral, aesthetic and cultural phenomena).
- training of proper habits.
- exposure to works of art, beauty in nature, actions of moral worth (to kindle the value sensibilities).
- providing situations and opportunities to practise the values (to enable internalisation of values).

The cumulative effect of these different kinds of experiences both in and out of school will lead to the internalisation of the values and their realization in thought and deed.

Activity Sheet No. 7

Questions for Discussion

- (i) Plan learning experiences to educate the emotions in respect of environment, peace, democracy, secularism, equality.
- (ii) List events/situations that are likely to occur in a normal school setting, that you can use for incidental value education.

Collect
Collate
Discuss

- (iii) Identify the different kinds of co-curricular activities that you could organise for promoting values in children.
- (iv) How would you organise your class to promote democratic values.

Teacher's Role

What is your role as a value educator? First, you should know that value education is not a sphere of activity distinct from your other professional activities as a teacher. Value acquisition goes on constantly in the school (and outside) through its various activities—instruction, relationship with pupils, co-curricular activities. Values are also transmitted through the general tone of the school and the so-called hidden curriculum. It is important, therefore, that we, teachers, order our behaviour in accordance with the highest standards and ethics of our profession. This will contribute to the creation of a school climate that is conducive to the development of high values and ideals. Summing up all that we have discussed on the varied aspects of value education, we may remember the following general principles (in the form of do's and don'ts) regarding our role as teachers:

- (a) Help to create an atmosphere of love, trust and security in the school. (Remember, for example, children lie out of fear. Insecurity causes aggressive behaviour).
- (b) Understand the child and its developmental characteristics and adapt your methods to them. (The young child cannot distinguish between a lie, fantasy and truth and is not in a position to understand the concept of truth. Similarly, 'stealing is wrong' does not make sense to a child who has no understanding of the concept of property).
- (c) Relate value education to concrete situations. Do not preach or exhort except under special circumstances.
- (d) Organise value education indirectly through a variety of co-curricular activities. Let children learn through living.
- (e) Use deliberate direct value education cautiously. Didactic approaches have their own limitations.
- (f) Do not forget that whatever be the subject you teach, you function (whether you are aware of it or not) as a value educator tool. There is no getting away from this fact. Let your students understand the subject in its totality—information content, logical structure, method and the qualities of mind and disposition it is associated with.
- (g) Remember you influence your children with your total personality. You are not judged in part but as a whole person. Develop your personality.
- (h) 'Example is better than precept'. This does not mean that you have to be a paragon of virtue. It only means that you have to be honest in your dealings

with students. If you love your subject, your students are likely to love it too. If you are concerned about the environment your students are likely to be concerned too. If you are punctual, kind, responsible, your students are likely to emulate them too.

- (i) Remember also that mere emulation is not education. We want children eventually not to do things in blind faith, custom or tradition, but after rational deliberation and thought. This is the essence of value education.

Activity Sheet No. 8

- (i) Suggest a few steps you would take to improve the atmosphere of the school.

(ii) Review the existing practices in your school in the light of suggestions (a) and (d) given above.

Our National Symbols

Overview

India is an independent country. As all independent countries of the world have their own flag, anthem and emblem, India too has its own flag, the tri-colour, National Anthem, "Jana Gana Mana" and emblem, the Ashoka Chakra. These are the three national symbols of our country. They are the symbols of our unity and identity. They were born out of the country's freedom struggle. The module, as such, is meant to instil sense of patriotism in children.

Objectives

This module should enable you

- to make children aware of the importance and significance of the national symbols.
- to organise activities which would promote respect for the national symbols.

Our National Flag

You must have seen our national flag on all government buildings in the country. Outside the country, it is hoisted on the Indian embassy buildings. In your school it is hoisted with great honour and respect during the Independence Day function.

Our national flag was adopted on 22 July 1947. It has three bands of equal width. The three bands are of three different colours—saffron, white and green. Since there are three colours, the flag is also known as the tri-colour flag or tiranga.

Our national flag is rectangular in shape. The ratio of its length to its breadth is 3:2. This means that if the length is 15 cm., the breadth should be 10 cm. The colour of the topmost band is saffron. This colour has a long history and tradition behind it. It is a constant reminder of the patriotism and sacrifice of those who laid down their lives in the freedom struggle. In the past, Rajput soldiers, while going to war, used to wear saffron coloured robes. Saffron is also the colour worn by sadhus and sanyasis. Thus it is a symbol of valour and sacrifice.

The middle band is pure white. White stands for truth and purity; truth in our words and actions, and purity in our thoughts. Mahatma Gandhi regarded truth as God. Both these virtues are emphasised in all religions. The white colour inspires us to be truthful, pure and simple. It also represents peace.

The lowest band is dark green. Green stands for life and prosperity. It tells us how nature has blessed our country with a rich soil. We have to work hard to make use of the fertile land and grow more food. This is the way we can fight poverty and bring about prosperity. Green also stands for faith.

Thus, the three different colours and their arrangement remind us of our glorious past and inspire us to be truthful and hardworking in order to bring about progress.

You will see that in the centre of the white band there is a wheel (chakra) in navy blue. The chakra has a historical background. At Sarnath, near Varanasi, Emperor Ashoka built a pillar in memory of the first sermon of Lord Buddha. This pillar is called the Lion capital of Emperor Ashoka.

The chakra in our national flag is taken from the Ashoka pillar. Its diameter is the breadth of the white band. It has 24 spokes. In Ashoka's pillar the chakra is a symbol of dharma. A wheel signifies motion and progress. The chakra in our national flag inspires the people to move forward, through the path of dharma or righteousness.

The flag also reminds us of our freedom movement. The flag of the Indian National Congress was similar, with one difference, that in place of the chakra, there was a charkha (spinning-wheel). The charkha was dear to Mahatma Gandhi. He believed that the charkha could help even an ordinary man to contribute his small share in the freedom struggle. After Independence, the charkha was replaced by the chakra. The flag, thus links the present with our past.

Can you find a few national flags of different countries which look somewhat similar to our own?

It is our duty to honour and respect our national flag. But do you know how to show respect for the flag? There are certain rules which we have to follow when the national flag is unfurled. First, make a list of these rules from your own knowledge, on the blackboard. Later, check whether you know all the rules or only a few of them, from the list of rules given below:—

- When the national flag is raised, the saffron colour band should be at the top.
- No flag or emblem should be placed either above the national flag or to its right.
- All flags should be placed to the left of the national flag, if they are hung in a line.
- When these flags are raised, the national flag must be the highest.
- When the national flag is carried in procession or on parade, it should be on the marching right or in front of the centre of the line, if there is a line of other flags.
- Normally, the national flag should be flown over important government buildings only, such as the High Courts, the Secretariat, Commissioner's Office and Collectorate.
- The use of the national flag is, however, unrestricted on certain special occasions such as Republic Day, Independence Day, Gandhi Jayanti and days of

national rejoicing. But even on these occasions, the national flag must not be displayed on motor cars and other vehicles.

- The national flag or any imitation of it must not be used for purposes of trade, business or profession,
- The national flag should always be taken down at sunset.

Our National Emblem

If you have a coin or a currency note in your pocket, take it out and examine it. You will find the imprint of the National Emblem on it. From the smallest coin to a currency note of the highest value, all bear the imprint of our national emblem. It can also be seen on all books and papers of the government. This emblem is in a sense the 'soul' of the government.

The national emblem was adopted from the Lion Capital of the Emperor Ashoka at Sarnath. You have already read about this in connection with the national flag. Though there were four lions in the original Lion Capital of Ashoka, in the national emblem, only three lions are visible. The fourth lion cannot be seen. There is a bull on the right side of the wheel and a horse on the left. If you have a close look at the emblem, you will see outlines of the other wheels on the extreme right and extreme left, 'Satyameva Jayate' which means 'Truth alone Triumphs' is inscribed below the crest, in Devnagri script.

Like the national flag, the national emblem has great significance. The chakra, as you know, is a symbol of motion and progress. The lions represent majesty and power. The horse stands for energy and speed and the bull for hard work and steadfastness. These are the qualities which the people of our country should possess, and which will help to build a better world. You have read about the great Emperor Ashoka. Do you know which battle changed the mind of Ashoka and made him a staunch believer in non-violence, peace and brotherhood? He sent his son, daughter and other people to spread his message of peace and brotherhood. The adoption of the Lion Capital of the Emperor Ashoka emphasises our faith and belief in peace and brotherhood even today.

Our National Anthem

You must have observed that whenever you celebrate Independence Day in your school the national anthem is sung. In fact, unfurling the national flag and singing the national anthem go together. The hoisting of the national flag is followed by the singing of the national anthem. Like the national flag, the national anthem is a symbol of unity.

Our national anthem was composed by the great poet Rabindranath Tagore. Find out in which year Rabindranath Tagore was awarded the Nobel Prize for Literature for his book 'Gitanjali'. Also read about the incident which prompted the great poet to return the title of Knighthood conferred on him by the British Monarch. By reading more about him you will come to know that Rabindranath Tagore was not only a great poet, but a great patriot.

The Constituent Assembly discussed the question of the national anthem, several songs were considered. Eventually, on 24 January 1950, this great song was chosen. The original poem runs into five stanzas. Only the first stanza has been adopted as the national anthem. It was first sung on 27 December 1911, at the Calcutta session of the Indian National Congress.

The national anthem is a song in praise of our motherland, It gives us a message of tolerance and national unity. As with the national flag, we must follow some rules when the national anthem is being sung, or its tune being played.

- When the national anthem is sung or played, everyone should stand to attention. To move or talk while the national anthem is sung, is highly disrespectful.
- One should know the words and meaning of the national anthem and be able to sing it correctly.
- When singing in chorus, sing in unison and with vigour.
- Show respect to the national anthem everywhere, and on all occasions, by standing erect, motionless and by singing in tune.

National Anthem

Jana-gana-mana-adhinayaka Jaya he,
 Bharat-bhagya-vidhata.
 Punjab-Sindhu-Gujarata-Maratha-
 Dravida-Utkala-Banga.
 Vindhya-Himachala-Yamuna-Ganga
 Uchchala-Jaladhi-taranga.
 Tava-subha name jage,
 Tava subha asisa mange,
 Gahe tava-Jaya-gatha.
 Jana-gana-mangala-dayaka, Jaya he,
 Bharat-bhagya-vidhata
 Jaya he, Jaya he, Jaya he,
 Jaya Jaya Jaya, Jaya he.

Activities

1. The study of national symbols may be introduced in relation to either Republic Day or Independence Day celebrations in schools. When these festivals are celebrated, the usual practice is to unfurl the national flag and sing the national anthem. Children will see the exact size and colours in our national flag. They should be told about the rules to be followed when the national anthem is sung. It is necessary that children understand the broad meaning of the national anthem. Let the children learn to sing the national anthem.
2. Every school has an 'emblem'. The emblem carries the motto of the school. Everyone in the school—principal, teachers, students and other staff are expected

to honour the school emblem. The emblem symbolises the identity and unity of the school. It is through such emotional identities that a school tries to achieve its best in terms of academic results, sports and other extra-curricular activities. Similarly, the country's national emblem demands the highest respect and honour from us. Our national emblem carries the motto 'Satyameva Jayate' or 'Truth alone Triumphs'. This motto is taken from the Mundaka-Upanishad which contains three parts (Mundakas), each of which is subdivided into two sections (Khandas). The third Mundaka says:—

सत्यमेव जयते नानृतं सत्येन पन्था विततो देवयानः।
येनाकमन्त्युषये हया पुकाया यत्र तत्सत्यस्य परमं निधानम्।।

(Truth alone triumphs, not falsehood).

It is the path of truth alone that will ultimately take our country to progress and prosperity.

3. Besides the national anthem, there are other national songs which merit our attention. They are important in our national life. They are sung on special occasions. Student should identify them and learn to sing them.

Children may be helped to make a scrap book of those countries' flags which look somewhat similar to the Indian national flag. Draw these flags, using colours, and write the name of the country under each flag.

4. A report of the hoisting of the national flag by Pandit Jawaharlal Nehru at the Red Fort on 16 August 1947, is given below. Let the children read this report. Also prepare the text of the Prime Minister's speech at the Red Fort on our last Independence Day function and make a summary of it.

National Flag Hoisted on Red Fort

On 16 August 1947, the Prime Minister of Independent India hoisted the national flag on the ramparts of the historic Red Fort in Delhi.

The following report on the ceremony is reproduced from the '*National Herald*' of 17 August 1947.

"Pandit Jawaharlal Nehru, Prime Minister, Government of India, hoisted the national flag on the Red Fort at 8.30 this morning. Two hundred and fifty thousand people witnessed the ceremony.

'You are gathered here in your thousands to honour this flag which symbolises Indian freedom, but the eyes of millions all over the world are also towards it,' said Pandit Nehru addressing the vast crowd. He arrived at the Fort punctually at 8.10 a.m. and was received by Sardar Baldev Singh (Defence Minister), Commander Delhi Area, Major-General Cariappa, Lady Mountbatten, Sardar Patel and Dr. Rajendra Prasad were also present. The Prime Minister then inspected a guard of honour of the R.I.A.F., Sikh Infantry and the R.I.N.

'Since yesterday, a new age began for Delhi, India and all its towns and villages,' he said. 'You know what has happened in the last 27 years in which we struggled and

sacrificed under this flag, and I need not go over that history. Today is neither your victory nor mine, but a victory for the whole country'

'The Indian way of struggle,' he continued, was that we should make friends even with our enemies..... Our freedom signalises the freedom of the other nations of Asia. This is a day of rejoicing not only for us but for people all over the world.'

'This fort has seen many ups and downs but today we have come to take what belongs to us'. Referring to the armed forces, Pandit Nehru said that they were a source of pride to the nation. They belonged to 'the nation and not to any foreign power. It would be their duty to guard and protect the honour of the nation and its flag'.

'You must all swear that we shall live as one, and work to increase our freedom and the prosperity of the masses. Although we have finally obtained our freedom, that is only the first stage of the journey, and we have a long way to go'

The story of the evolution of the Indian national flag is also given below. Let the teacher read this out to the children. The teacher should emphasise the fact to the children that our national flag, as we see it today, was not adopted just in a couple of meetings or conferences. The flag evolved over the years and was finally accepted by the Constituent Assembly after giving due consideration to its various stages of evolution. More over, the different colours in our national flag should not be identified with different communities; rather the colours represent the feelings and sentiments of the entire Indian people.

Evolution of the National Flag

The story of the evolution of the Indian national flag is given below:

1906 : Three Colours: Saffron with eight stars across white with 'Vande Matram' and green with the moon to the right and the sun to the left. Proposed by some Indians in England and France who thought of an 'Indian national flag'. Not recognised in India.

1916 : Two Colours: Red and green, with five red and four green stripes. Emblem of the Great Bear. Union Jack at top left. In vogue during the 'Home Rule' days.

1921 : Three Colours: White, green and red, with a charkha across all the colours. Sponsored by Gandhiji at the time of the Vijayawada session of the All-India Congress Committee. Used at Congress sessions till 1931, though not officially accepted by the Congress.

1931 : One Colour: Saffron, with a charkha at top left. Proposed by a committee appointed by the Working Committee after the Karachi Congress. Not approved by the Working Committee.

1931 : AUGUST : Three Colours: Saffron, white and green, charkha in blue, in the middle, across the proportion of 3:2. It was proposed by the Working Committee. The form of the flag suggested by Gandhiji was retained with slight changes in the order of colours and position of the charkha.

Accepted by the All-India Congress Committee officially in Bombay. The colours

are not symbols of various communities. Saffron represents courage and sacrifice, white, truth and peace, and green faith and strength. The charkha stands for the welfare of the masses.

From 1931, 26 April was observed as National Flag Day. 1947: 22 July: New Flag with the 'Ashoka Wheel' instead of the Charkha in the middle. Proposed by Jawahar Lal Nehru and accepted by the Constituent Assembly.

5. If you look closely at our paper currency you will see several interesting things. It has the imprint of the national emblem, and each note is printed in Hindi and English. Besides Hindi and English, many other languages are used. For instance, on the back of a one-rupee note 'one-rupee' is printed in thirteen different Indian languages.

Let the children find out:—

- (i) What the significance is of using so many languages on a currency note
- (ii) Which different languages are used on a currency note
- (iii) Whether all the languages provided in the Eighth Schedule of the Indian Constitution find a place in the paper currency of different values

The Eighth Schedule of the Indian Constitution mentions the following fifteen languages:

1. Assamese	6. Kashmiri	11. Sanskrit
2. Bengali	7. Malayalam	12. Sindhi
3. Gujarati	8. Marathi	13. Tamil
4. Hindi	9. Oriya	14. Telugu
5. Kannada	10. Punjabi	15. Urdu

6. Is the number plate of the Rashtrapati Bhawan car an appropriate place for displaying the Ashoka Chakra? This question was raised in the Lok Sabha. It was pointed out that the Ashoka Chakra is always given pride of place. Outstanding men from the services have the honour conferred on them of wearing this national symbol. Students may like to discuss this or other similar questions.

Key Questions

1. Give one reason why we should respect our National symbols.
2. What is the significance of the three colours given in our national flag?
3. Why was the charkha replaced by the Chakra?
4. How does our national emblem remind us of our past?
5. Which is the most commonly used source through which children get to know our national emblem?
6. What is the meaning of our national anthem?
7. How should we show our respect for the national flag when it is hoisted, and to the national anthem when it is sung?
8. Which is our national bird and national flower?

Further Reading Material

The original poem by Rahindranath Tagore, from which the first stanza was accepted as the national anthem, runs as follows:-

Jana-gana-mana adhinayaka jaya he Bharata bhagya vidhata

Punjab-Sindh-Gujarat Maratha Dravida Utkala Banga.

Vindhya Himachala Yamuna Ganga uchchala jaladhi taranga

Tava Subha name jage, tava subha asisa mange,

gahe tava jaya gatha

Jana-gana-mangala dayaka jaya he Bharata bhagya vidhata

Jaya he, jaya he, jaya he, jaya jaya jaya jaya he,

Aha raha toba achavan pracharita, suni tava udaar vani

Hindu Boudha Sikha Jain Parsik Musalman Christan Purab-

Paschim aase tava sinhasan pashe,

Premohar hoy gantha

Jana gana aikya vidyak jaya he Bharata bhagya vidhata

jaye he, jaya he, jaya he, jaya jaya jaya, jaya he

Patan-abhyudoy-bandhar pantha, yug yug-dhavi yatri,

He chira sarathi, tava ratha chakra mukharita path

dina ratri

Darun-viploba-majhe tava sankhadhwani baje,

Sankatdukh trata

Jana-gana-path parichyaka jaya he Bharata Bhagya Vidhata

Jaya he, jaya he, jaya he, jaya jaya jaya, jaya he

Ghor timirghone nibirh nishithe pirtta murchi deshe,

Jaggrata chila tava abichol mongal natanaya animeshe

Du-swapne atanke raksha karile anke,

Sneha moyee tumi mata

Jana-gana dukh-trayaka jaya he Bharata Bhagya Vidhata

jaya he, jaya he, jaya he, jaya jaya jaya, jaya he

Ratri pravatila, udila rabichhabi purba udaygiri bhag

Gahe Vihangama, purna samiran nabajivan ras dhale Tava Karunaruna-range nidrita

Bharat jage

Tava charane nata matha

Jaya jaya jaya he, jaya rajeswara, Bharat-Bhagya vidhata

jaya he, jaya he, jaya he, jaya jaya jaya, jaya he

Here is an English translation of the whole poem, done in 1919, by the poet himself, "Thou art the ruler of the minds of all people, dispenser of India's destiny. Thy name rouses the hearts of the Punjab, Sind, Gujarat and Maratha, of the Dravid and Orissa and Bengal; it echoes in the hills of the Vindhya and Himalayas, mingles in the music of the Jamuna and Ganges and is chanted by waves of the Indian Sea. They pray for thy blessings and sing thy praise. The saving of all people waits in thy hand, thou dispenser of India's destiny.

"Victory, Victory, Victory to thee.

"Day and night thy voice goes out from land to land calling the Hindus, Buddhists, Sikhs and Jains around thy throne and the Parsees, Muslims and Christians. The East and West join hands in their prayer to thee, and the garland of love is woven. Thou bringest the hearts of all people into the harmony of one life, thou dispenser of India's destiny.

"Victory, Victory, Victory to thee.

"The procession of pilgrims passes over the endless road rugged with the rise and fall of nations, and it resounds with the thunder of thy wheels. Eternal Charioteer: Through the dire days of doom thy trumpet sounds and men are led by thee across death. Thy finger points the path to all people. Oh dispenser of India's destiny;

"Victory, Victory, Victory to thee.

"The darkness was dense and deep was the night.

"My country lay in a deathlike silence of swoon. But thy mother's arms were around her and thine eyes gazed upon her troubled face in sleepless love through her hours of ghastly dreams. Thou art the companion and the saviour of the people in their sorrows, thou dispenser of India's destiny'.

"Victory, Victory, Victory to thee.

"The night fades; the light breaks over the peaks of the Eastern hills; the birds begin to sing and the morning breeze carries the breath of new life. The rays of thy mercy have touched the waking land with their blessings. Victory to the King of Kings, Victory to thee, dispenser of India's destiny.

"Victory, Victory Victory to thee."

राष्ट्र गान
स्वर लिपि NOTATION
स : पांचवां काला S : Fifth Black

National Anthem

सरे	गग	गग	गग	गग	रेग	म	म	मम	म	मग	रेन	ग	-	-
जन	गग	गग	गग	गग	जय	हे	द्रा	विड	उट	कल	ब-	ग	-	-
SR	GG	GG	GG	GG	RG	M	M	MM	M	MG	RN	G	-	-
JA	GA	MA	ADHI	NA	JA	HE	DRA	VI	UT	KA	BNA-	GA	-	-
NA	NA	NA			YA			DA		LA				
ग	गग	रे	रेरे	नीरे	-	स	ग	गग	ग	गरे	पप	पम	म	म
भा	रत	भा	व्यवि	-धा	-	प	वि	छहि	मा	चल	यमु	ना-	ग	गा
G	GG	R	RR	NR	S	S	G	GG	G	GR	PP	PM	M	M
BHA	RA	BHA	GYA	DHA-	TA	PUN	VIN	DHYA	MA	CHA	YA-	NA	GAN	GA
	TA		VI					HI		LA	MU			
प	पप	-प	पप	प	पम	प	ग	गग	रेरे	रेरे	नीरे	स	-	-
जा	बसि	-धु	गुज	रा	रा-	घ	उ	छल	जल	धित	र-	ग	-	-
P	PP	-P	PP	P	PM	P	G	GG	RR	RR	NR	S	-	-
JA	BASIN	-DHU	GU	RA	RA	THA	U	CHCH	JA	DHI	RAN	GA	-	-
			JA		MA			HALA	LA	TA				

राष्ट्र गान		स्वर लिपि		NOTATION		S : Fifth Black		National Anthem	
गम	तव	गम	ग	रेग	म	-	-	प	प
शुभ	ग	जा-	मे	जा-	गे	-	-	दा	यक
GG	G	RG	G	RG	M	-	-	P	PP
TA	NA	JA-	ME	JA-	GE	-	-	DA	YA
VA	HA					-	-	KA	YA
गम	प	रेम	मग	रेम	ग	-	-	रेम	ग
शुभ	आ	मा-	शिव	मा-	गे	-	-	धा-	ता
PP	P	RM	MG	RM	G	-	-	RM	G
SU	A	MA-	SI	MA-	GE	-	-	DHA-	TA
BHA	SA		SA			-	-	VI	
ग	रे	नीरे	रे	नीरे	स	-	-	नी	-
हे	तव	मा-	जय	मा-	या	-	-	हे	-
G	RR	NR	RR	NR	S	-	-	N	-
GA	HE	GA	JA	GA	THA	-	-	HE	-A
			VA			-	-		-O
			YA						

Promotion of National Integration

Overview

Various commissions and committees have emphasised the role of education in promoting national integration. The Kothari Commission's report observed that one of the basic objectives of education should be to accelerate the process of social and national integration.

The Gajendra Gadkar Committee of the National Integration Council observed that education from primary to postgraduate stage should be re-oriented to:

- Serve the purpose of creating a sense of Indianness, unity and solidarity
- inculcate faith in the postulates of democracy
- help the nation to create a modern society out of the traditional one.

The latest in this regard are the observations made in the National Policy on Education, 1986. While indicating the essence and role of education, it states:-

“Education has an acculturating role. It refines sensitivities and perceptions that contribute to national cohesion, a scientific temper and independence of mind and spirit thus furthering the goals of socialism, secularism and democracy enshrined in our constitution.”

To foster the feelings of oneness the Policy visualises a national system of education for the country which is based on a national curricular framework. The latter would contain common core along with components which are flexible. The core components identified in the Policy are:

- The history of India's Freedom Movement
- Constitutional obligations
- Content essential to nurture national identity
- India's common cultural heritage
- Egalitarianism, democracy and secularism
- Equality of the sexes
- Protection of the environment
- Removal of social barriers
- Observance of the small family norm
- Inculcation of the scientific temper

While dealing with value education in the chapter “Reorienting the Content and Process of Education” the policy indicates:

"In our culturally plural society, education should foster universal and eternal values, oriented towards the unity and integration of our people. Such value-education should help eliminate obscurantism, religious fanaticism, violence, superstition and fatalism."

This being the importance of education in promoting national integration, it is essential that teachers understand its meaning and value and take steps to achieve the set objectives.

Objectives

After reading this module, you will be able to:

- understand the concept of national integration
- appreciate the idea of 'unity in diversity' prevalent in the country
- recognise how petty differences of caste, creed, cultural and language issues damage the larger interests of the nation
- emphasise the values and attitudes related to national integration while teaching various subjects
- organise and evaluate co-curricular activities directed at promoting national integration
- create a climate in the school conducive to promoting national integration.

Learning Activities

Concept

You will have heard and talked about the term 'national integration' quite often. You may also have read about and discussed the concept on various occasions. Let us systematise the idea by answering a few questions:

Activity Sheet No. 1

What do you understand by national integration?

Write a paragraph about the concept.

Collect
Collate
Discuss

Indian society is a pluralistic one with people speaking different languages, having different religions, following a variety of cultural practices. In its large diversity, there is an underlying force that binds all the people into oneness. This force is the feeling of Indianness and the sense of belonging to the country, its progress and unity. The feelings also include a commitment to build a welfare society in India. The diversity in Indian culture is a strength, not a weakness. It is indeed, a weakness when narrow loyalties to caste, creed, religion, race, language and region overplay their roles.

A healthy balance has to be struck between the two aspects i.e. 'unity' and 'diver-

sity'. Whenever this balance is disturbed, divisive forces raise their ugly heads and disturb the peace of the country. National integration implies recognition and appreciation of diversities. It is thus a positive concept. National integration should not be considered a rigid uniformity devoid of variety. On the other hand, it values differences and diversities. What it opposes is social conflict and disruption on the basis of these differences. It aims at reducing prejudices on the basis of caste, creed, language, race, religion and region. To be a good human being, it is necessary that one should understand the feelings and values of other fellow-beings. Love, sympathy and tolerance become an essential part of human behaviour. Such qualities in human beings help to develop a healthy society. India's history and its cultural heritage are unifying forces. An urge to remove poverty, hunger and disease and to provide economic and social justice to our people is yet another unifying factor.

Need for National Integration

Having understood the concept of national integration, let us know why it is necessary to emphasis it in our society.

Activity Sheet No. 2

Why is national integration necessary?
Why do the divisive forces become active?
Write a para on each question

Collect
Collate
Discuss

Peace in a society liberates the human mind. It gives freedom and provides an opportunity to think about the progress and development of society. History exemplifies that in a region or a country during a period of peace, scholars have put forth new ideas, scientists have made discoveries and inventions and human society has progressed materially as well as spiritually. People living in a country torn with conflict and strife, have to bother about the security of life and property. Such people are not able to contribute to the progress and welfare of their society.

The British rulers thrived on the policy of 'divide and rule' creating ill-feeling among various communities in India. The country as a whole also suffered from poverty and inequalities. The people rose as a nation to oppose British rule and to obtain freedom from them. After a prolonged struggle and supreme sacrifices, the nation won independence in 1947. The new Constitution framed by our own people was soon adopted. With the promulgation of the Constitution, the people resolved to usher in a new social order based on principles of socialism, secularism and democracy. However, hoarders of wealth, fundamentalists and some people in authority fear that they may lose their privileges in the new social order. The bogies of caste, region, language and religion are raised and disturbances created that retard the growth of a new order. At present such forces seem to be active all over the country, challenging the very idea of national integrity. If the people have strong faith in the values of secularism, socialism and

democracy, they can undo the design of the divisive forces. The need of the hour is that people should unite and strive to build a forward-looking welfare society.

Role of Education

Let us try to understand the role of education and that of the teacher in inculcating attitudes and values positively related to national integration.

Activity Sheet No. 3

What is the role of education in promoting national integration?

Discuss the general role of the teacher in promoting national integration.

Write a paragraph on each of the two points raised above.

Collect
Collate
Discuss

In order to achieve the objectives mentioned above, our educational system should play a vital role. In fact a good educational system would necessarily take care of the aspect of national integration. Promotion of national integration must be an important aspect of the school curriculum at all stages. The teaching of various school subjects, various activities undertaken in the school, the entire climate of the school should be conducive to inculcating the values related to national integration among students. The teacher's role is significant in creating such a climate.

The values related to national integration develop in the minds of the children in a subtle way. It is not through lectures or sermonisation that students imbibe such values. Through a number of activities and programmes, both in the classroom and outside, gradually attitudes related to national integration can be internalised. The teacher will have to explore situations in the school and in the local community, which he or she can use to develop a teaching programme.

The teacher may sometimes find that forces of disintegration in the environment outside the school are so strong that his or her efforts in school are not effective. But it should also be realised that if the school does not counter the outside effects, there is the likelihood that attitudes related to disintegration may be perpetuated in the minds of growing children. It is, therefore, essential that the teacher should continue to play a positive role with regard to the inculcation of attitudes related to national integration.

The teacher himself has to present exemplary behaviour in this regard to the students. He or she has to make himself or herself a living symbol of national integration.

In thought, word, and deed, teachers must be free from all prejudices of caste, religion, language, region and sex.

Specific Role of the Teacher

Let us now discuss the specific role that a teacher can play in promoting national integration.

Activity Sheet No. 4

Which school subjects have potentialities for inculcating values and attitudes related to national integration, and why? Write a paragraph on each subject.

Collect
Collate
Discuss

Language and Literature

Teaching language and literature has strong potentiality in promoting the idea of national integration. In earlier classes where the emphasis is on development of language, skills, words, sentences, idioms and proverbs should be so used that no prejudice against any caste, creed, region or linguistic groups are developed. Such examples that promote the feeling of oneness of the people should be highlighted. In the higher classes, textbooks in languages are generally anthologies of literary pieces in various forms. Literature has a strong emotional overtone. This should be fully utilised to develop emotions related to the unity of the country. The literature of the part sometimes reflects the prejudices prevalent at one point of time. If such pieces are included in the textbooks, the teacher has to explain these in the context of the times in which they were written. The generalisations drawn in the literary pieces with regard to some caste, creed, people or language may not always be true. While teaching such pieces from literature, these points should be explained clearly. For composition such topics should be selected that provide an opportunity to students to express their ideas on national integration.

While teaching language the teacher should equip himself with some knowledge of other languages. He or she should be in a position to supply references of well-known literary works and literary figures of other languages. He or she should also be able to suggest supplementary reading material which describes the life and places of other regions.

History

The teaching of Indian history should be seen in broad perspective. History is no longer the story of kings and queens and of the battles they fought. Its purpose is to help students to understand the process through which societies have evolved and appreciate the achievement of mankind. Such an understanding helps us to understand the present correctly, and thus contribute to making a better future. The content of a school textbook has undergone a change in view of this approach. However, there are

still many textbooks which reflect the traditional approach. Sometimes the books have communal, regional and sectorial biases. Teachers will have to be very careful while dealing with such textbooks.

The history of India, if taught in correct perspective, will emphasise unity in diversity. It will lead students to appreciate variety in our language, literature and culture, and also the contribution of various regions and people to the growth of India's culture and heritage.

The history of India's freedom struggle is a glorious part of our history. Its story should enable students to appreciate the sacrifices made by our elders, and value our hard-earned freedom.

Geography

The content of geography highlights the interdependence of various regions and areas. The raw material produced in a region is utilised in factories located in other regions. The give-and-take between various regions brings the people together.

The study of geography enables students to understand the process of growth and development of variety in dress and food, shelter and habitats, customs and traditions, festivals and recreation of our people. It also explains the process of the intermingling of various peoples and races. The content of geography thus explains the concept of unity in diversity in a scientific way.

Civics

Civics deals with the civic life of the people, explaining the rights and duties of all the citizens. It also deals with the constitution of the country the teaching of which can be utilised to develop the concept of unity. The constitution is the reflection of the will of the Indian nation and is the symbol of its nationhood. The ideas of single citizenship, fundamental rights, duties, the federal character, parliamentary system of government and existence of a Supreme Court etc. are topics which emphasise the unity of the country.

Economics

The economic welfare of the people of the country is the most important goal for which the nation is striving. The teaching of economics emphasises the interdependence of various regions. It also emphasises the need for peace and tranquility for economic development. Teaching the subject emphasises the need to make a united and concerted effort to build a prosperous India. Removing poverty, ameliorating the deprived and weak, raising the standard of living, controlling population growth, producing wealth and distributing it equally, are some of the national goals, in achieving which the people of India, regardless of caste, creed and region are engaged. Any disturbance of the peace retards the pace of progress. Teaching economics highlights these aspects.

Science

One important objective of teaching science is to enable students to think logically and rationally. This process helps to develop a scientific temper. Many of our prejudices are based on our thinking and attitudes which do not have any scientific basis.

The formal teaching of subjects helps in inculcating the ideals of national integration but it is the entire climate of the school which is responsible for cultivating attitudes. The climate of a school is reflected through its activities, programmes and projects. Let us see what activities, programmes and projects can be taken up in schools to promote national integration.

Activity Sheet No. 5

- | | |
|--|-------------------------------|
| <ol style="list-style-type: none">1. Prepare a list of activities which you can undertake in your school to promote national integration2. Develop a 'project' dealing with the theme of national integration | Collect
Collate
Discuss |
|--|-------------------------------|

Suggested Follow-up Activities in Schools

1. The teachers/subject committees in schools may review the textbooks used in schools with a view to identifying material that may be prejudicial to national integration. The teachers should try to present such material in correct perspective. They should also identify such materials/situations in textbooks which can be utilised to develop teaching programmes for inculcating ideas of national integration.
2. The teachers may organise activities and take up 'projects' in various classes that may be helpful in developing awareness and understanding of people's ways of living in different parts of the state/country. Projects can also be visualised for a group of classes or for the entire school. While involved in these activities and 'projects' it should be seen that students play an active role in their planning and execution. Cooperation of the parents and the community should also be sought in organising these activities. Activities should not be confined to classrooms only. Students should move in the community and observe its functions. The community should also be invited to participate in school activities.
3. The daily programme of the school should include activities like a morning assembly where community singing of songs of a secular nature may be done. Brief talks of students/teachers highlighting the theme of national integration may also be arranged.

Education for International Understanding and Human Rights

Overview

The young students in our schools today will live out their lives in the first half of the 21st century. What kind of world will they live in? What preparation by way of planned education of children does the present and future world require? If we look at some of the major trends in the contemporary world, we would certainly be convinced of the need for promoting international understanding. The increasing power of destruction and inevitability of international cooperation in the face of the unprecedented growth of science and technology, are the two major factors which have made world peace and international understanding an imperative. At the same time, we should also know the various strategies and techniques that we can adopt to promote international understanding among students.

Objectives

This module has been designed to enable you:

- to appreciate the need for developing international understanding and creating awareness of human rights among students
- to know and use various methods for promoting international understanding and awareness of human rights.

Learning Activities

Activity No. 1

Why is there a need today to promote world peace and understanding?

What major factors in the present day world have a bearing on international peace and cooperation?

Collect
Collate
Discuss

Over us hangs the real threat of a nuclear war which, if it occurs, would mean an end to the human race and its culture. Besides, there are occasional threats of tensions and conflicts between countries, resulting in full-scale wars. We live in a world which has already entered the atomic and space age. New inventions in science and technology are opening up unprecedented possibilities in personal and public life. As Jawaharlal Nehru once commented on education for the 20th and 21st centuries: "I envy the boys and girls who will live in that period. It ought to be the most exciting time of all to be alive."

Countries of the world today have many similarities, as well as vast differences. They have frightening inequalities in standards of living and in military power. However, no country, small or big, poor or rich, developing or developed, can live by itself isolated from the rest of the world. Problems of one country have become problems of the whole world. Many problems, such as the nuclear arms race, human rights, a new international economic order and environmental pollution are the concerns of all of us. Therefore, there is an urgent need to promote international understanding among students and to develop internationally-minded individuals. It is because of this need and the importance of world peace and understanding that the National Policy on Education, 1986 in its para 3.5 states: "India has always worked for peace and understanding between nations, treating the whole world as one family. True to this hoary tradition, education has to strengthen this world view and motivate the younger generations for international cooperation and peaceful coexistence. This aspect cannot be neglected."

Activity No. 2

What activities do you undertake in your school for the promotion of national integration?

How will you link up these activities and national integration with international understanding?

Collect
Collate
Discuss

India, with her multi-racial, multi-linguistic, and multi-religious character in a way reflects the composition of the present world. Therefore, the training which students get to develop the right attitudes for national integration should in point of fact, form the right basis for developing international understanding. The tolerance and appreciation required for understanding different parts of India is the same as is required for developing international understanding. "If through the schools and universities, a person learns to appreciate the basic rightness of that phrase (i.e. 'the fruitful diversity of cultures of mankind') in his own federal and multi-community country, he is less likely to forget it on the international plane where he deals with persons belonging to different nations by enjoying equal membership in the community of mankind."

NCERT's Curriculum for the Ten-Year School, brought out in 1975, also emphasised the promotion of national consciousness and the development of international understanding as one continuous process.

In the sacred writings of the world's leading religions you will find an amazing similarity. Take, for instance, the golden rule of Hinduism: "That is the sum of duty; do naught to others which if done to thee would cause thee pain." (श्रपयता धर्म सर्वस्व धृत्वा चैतावधारयेत्। आत्मनः प्रतिकूलानि परेषां न समाचरेत्।।: वेद व्यास)

Activity No. 3

In how many religions can you find a similar rule? Examine the writings of different religions and identify similar rules.

Collect
Collate
Discuss

Buddhism

"Hurt not others with that which pains yourself."

Christianity:

"All things whatsoever ye would that men should do to you, do ye even so to them."

Islam:

"No one of you is a believer until he loves for his brother what he loves for himself."

Such writings may be identified in other important religions and sects. Another fruitful activity could be in the area of national symbols of various countries. Every country has its national flag and anthem. The United Nations has its flag. National symbols of India stand for the noble ideals of peace, friendship, sacrifice and truth. Similarly, the national symbols of other countries also stand for certain ideals and noble sentiments of their peoples. As we respect our national symbols, so should we respect the national symbols of other countries. In such an activity, the commonality of emotions and sentiments should be highlighted. Detailed information about national flags and anthems of different countries is of the utmost importance.

Activity No. 4

Why is 10th December celebrated as Human Rights Day every year?

Do you celebrate the day in your school? How?

Can you point out any violation against human rights within, or outside our country?

Collect
Collate
Discuss

The Universal Declaration of Human Rights was unanimously adopted by the General Assembly of the United Nations on 10th December, 1948. Since then, 10th December has been observed every year as Human Rights Day throughout the world. The Declaration has a Preamble and 30 Articles. All men and women everywhere in the world are entitled to the rights and freedoms contained in the Declaration, without any discrimination. You should find out what these rights are.

International Bill of Rights

In addition to the Universal Declaration of Human Rights, two Covenants on Human Rights were adopted in 1966: 1. The International Covenant on Economic, Social and Cultural Rights; and 2. The International Covenant on Civil and Political Rights. The Covenants contain measures for the international supervision of rights set out in the Covenants, and for the settlement of complaints by Member-States. Besides these two Covenants, an Optional Protocol to the International Covenant on Civil and Political Rights was adopted. It provides for international machinery for dealing with complaints from individuals claiming to be victims of the violation of human rights. The Universal Declaration, two Covenants and the Optional Protocol together are known as the International Bill of Human Rights.

The Universal Declaration has been described as one of the most influential documents of all time. It has influenced many modern constitutions including that of India. Most civil and political rights recognised in the Universal Declaration find a place in the Indian Constitution. Socio-economic rights were included in the chapter on the Directive Principles of State Policy, as desired objectives.

The most blatant violation of human rights is practised in South Africa in the form of apartheid or racial discrimination against the blacks. While South Africa is rightly condemned for its policy of apartheid, it is not universally boycotted in spite of resolutions of condemnation passed and appeals made by various UN bodies. In our own country, you must have read news items on the violation of human rights, such as rights of the child, of women, of weaker sections and of minorities. You should discuss these matters with your students. A survey of the conditions in which poor people live is a good method to develop empathy among students.

Evaluation

1. What major factors, according to you, are helpful in the promotion of world peace and cooperation? Why do we need to develop international understanding among students?
2. What activities do you consider practical in your school for promoting international understanding?
3. Through what activities would you develop awareness of human rights among students?

Facilitating Enrolment and Retention

Overview

This training module is about the children who have not been to school or have discontinued schooling prematurely. The number of out-of-school children is large. This is one of the major problems in the area of primary education.

This module seeks to develop in you an awareness about various issues related to universalisation of primary education. The aim is to bring all children to school and to encourage them to attend school regularly up to the age of 14 years.

After you have participated in the activities suggested in the module, you will develop a further understanding of the role of the teacher in facilitating enrolment and retention.

Shortcomings in instructional strategies and school that make it unattractive will be identified and discussed. It will provide an opportunity to plan alternative instructional strategies and contribute towards the improvement of the school climate.

Objectives

After reading this module, you will be able to:

- state the causes that keep children out of school or lead to their premature withdrawal;
- identify sections of the community to which out-of-school children belong;
- discuss your role in facilitating enrolment and retention;
- locate such children in the community, understand and use motivational techniques with parents/children for schooling;
- analyse shortcomings in instructional strategies and school that make the school unattractive;
- suggest alternative instructional strategies to improve the school so as to make it attractive

Learning Activities

You have been a teacher for quite some time. Your school is open to all the children of the community. You know that many children from your community attend the school. However, you are aware that there are also children who do not attend the school.

Often you may have wondered why these children are not in school. You may have guessed the reasons why these children are not in school.

Activity Sheet No. 1

Can you recall these reasons? If yes, write them down on a separate sheet.

Collect
Collate
Discuss

Let us now look at this problem from another angle. Such children may be both boys and girls. They may belong to different sections of the community. It is hoped that you are aware of this phenomenon and also have observed it minutely.

Try to answer the following questions:

Activity Sheet No. 2

Are there more boys or girls among the non-attending children?
What are the reasons? From which sections of the community do the smallest number of children come who are attending school?
What are the reasons?

Collect
Collate
Discuss

It is observed that some of the non-attending children of the community are school dropouts. It has been found that the dropout incidence is very high at the primary stage. There may be many reasons for the high rate of dropouts. These may be academic and non-academic.

Activity Sheet No. 3

Write down the academic reasons for the school dropouts.

Collect
Collate
Discuss

Now you are familiar with the reasons why these children do not attend school. You also know to which sections of the community they belong.

It is not only your problem. Other teachers also face such problems. It is a national problem. A large number of children who should have been studying in Primary/Elementary schools are in fact out of school. According to one report approximately 5 crore children in the age group 6-14 are out of school (Ministry of Education Report, 1982). This problem adversely affects the development of the individual, society and the nation. It has to be tackled on a war footing.

Conscious of the problem, our national leaders stressed the need for tackling it even before independence. Gopal Krishna Gokhale and Mahatma Gandhi brought the issue to the attention of the public. This concern is boldly reflected in the Indian Constitution. It envisages that all children up to the age of 14 years should be given free, universal and compulsory education. This comprises the following:

- providing educational facilities for all
- ensuring enrolment for all
- ensuring attendance for all
- ensuring retention of all
- ensuring successful completion of the primary stage by all
- ensuring quality education for all through school improvement.

Let us now consider the personal experience of a primary school teacher. At the beginning of the session the enrolment in the class was quite high. Students regularly attended the classes for a month or so. Gradually, the attendance started declining. Some of the students dropped out of school while some were irregular in attendance. Finally the students who were irregular in class also dropped out of the school. Because of the fall in attendance, the teacher felt concerned. He took certain measures to bring these children back to school.

Activity Sheet No. 4

- Can you guess the steps that the primary school teacher took to bring the dropouts back?
- In your opinion what motivated the teacher to bring back the dropouts to his class?
- What could the role of a teacher be in such a situation, to bring non-starters and dropouts back to school?
- With children who have never been enrolled, what can be done to bring them to school?

Collect
Collate
Discuss

The first step in this direction would be to locate the out-of-school children in the community.

Activity Sheet No. 5

- Mention the sources which you would wish to contact to locate such children?
- What tools and methods would you use to locate such children?

Collect
Collate
Discuss

To locate the out-of-school children, the following action can be taken by you:—

1. Consult the attendance register
2. Contact the attendance office

The survey may involve:

- a. Collecting information from children/parents (this could be done through face-to-face interviews).
- b. Recording the information collected.

The information may be recorded in a proforma like the following:

- i. Name of child _____
- ii. Age _____
- iii. Name of father/guardian _____
- iv. Family income source _____
- v. Work in which the child is engaged _____
- vi. Did the child ever attend school (Yes/No) _____
- vii. Reason for leaving school _____
- viii. Is he keen to study in a school/NFE Centre? (Yes/No) if no, why? _____

After you have located out-of-school children in the community, the next question which may come to mind is how to bring them to school. This will require correct motivation of parents and children. Some of these measures could be as follows:

- i. Holding regular meetings with parents/guardians to develop a better understanding of the child and the school.
- ii. Meeting opinion-makers of the community, such as the elders and the educated to influence and educate the reluctant community members.
- iii. Inviting parents/guardians to school to see its regular programmes and to participate in some special functions of the school.
- iv. Displaying certain information and items produced by the children at festivals/mela or other such functions.
- v. Making parents/children aware of the incentive schemes available for those attending school.

You may have realised that one reason for leaving school could be unattractive instructional procedure and the school environment. As a teacher, here is an opportunity for you to analyse and improve upon your instructional strategies and to contribute towards making the school environment better, so that the children are retained in the school.

Activity Sheet No. 6

- | | |
|--|-------------------------------|
| <ul style="list-style-type: none"> — Mention the steps you can undertake to improve your instructional strategies? — Suggest the measures which you can take towards improving the school environment? | Collect
Collate
Discuss |
|--|-------------------------------|

We began with the assumption that you were already familiar in varying degrees, with many issues and suggested actions related to the theme. It is hoped that this interaction has helped you to develop and further clarify your understanding and attitudes related to various aspects of the theme. If this is so, it must also lead to raising the level of your concern for the in-school and out-of-school children of the community. In your school situation you may develop action points for improving enrolment and retention of children.

Questions

1. What are the causes that keep children out of school?
2. What probable measures can be taken to facilitate enrolment in schools?
3. How can school environment and instruction be improved in order to retain children?
4. Why is a school considered unattractive by/for some children?

Institutional Planning and Management

Overview

It is a common experience that anything done in a properly planned manner yields much better results than something done in a casual or routine fashion. While planning, one has to take into account the prevailing situation and think of measures to improve it, considering the constraints under which one has to operate. The process of planning also implies evolving effective built-in mechanisms for monitoring and evaluating the plan with a view to indentifying bottlenecks and to take timely corrective action.

Planning for social and economic development, of which educational planning forms an integral part, was started in our country more than 35 years ago. All through this period, our planning system adopted a 'top-to-bottom' approach with the result that most of our schools remained unconcerned with the educational development plans prepared at the state or national levels. The Education Commission (1964-66) aptly remarked that "no comprehensive programme of educational development can ever be put across unless it involves every educational institution and all the human factors connected with it—its teachers, students and local community." (p.157)

Decentralisation of educational planning and management at the institutional level would now form the base of the planning process, permitting the active participation of all educational functionaries, school principals/headmasters, teachers, students, parents and other community members where each one of them will have specific tasks to perform.

Objectives

After reading this module you will be able to:

- understand the concept of institutional planning,
- realise the importance of involving all concerned in the planning process,
- appreciate the role of institutional planning in the context of multi-level planning at the block, district, state and national levels,
- appreciate some of the merits of the 'bottom-to-top' model of planning, and
- identify institutional needs and formulate projects and programmes for institutional development.

Concept of Institutional Planning and Management

Planning is of three types, namely, short-term, medium-term and long-term. Institutional planning at school level will be largely short-term or medium-term, the duration of a short-term plan being one year, and that of a medium-term plan ranging from between two and three years.

The concept of institutional planning envisages the involvement of all concerned with the proper functioning of an institution, namely, the principals/headmasters teachers, students, parents and other members of the local community in the process of planning.

This implies that every institution will identify its own problems, assess its own needs through systematic planned efforts, and find alternative solutions to those problems and develop appropriate programmes and projects to meet assessed needs by itself.

Sometimes the school calendar, which includes the school principal's planning with respect to assignment of duties to his staff and teachers' planning of lesson units and homework assignments, is confused with institutional planning. Undoubtedly, the school calendar is important in its own way but it is different from institutional planning. It has nothing to do with the development aspects of education in the school. An institutional plan, on the other hand, includes interalia a number of developmental programmes designed mainly to improve the quality of education at the school.

The term 'management' in this module is used as synonymous with 'administration' and includes personal administration, financial administration and other similar activities undertaken by the head of the school in the day-to-day running of the school.

Activity Sheet No. 1

Attempt a definition of institutional planning in your own words and also state the need for institutional planning.

Collect
Collate
Discuss

Objectives of an Institutional Plan

The specific objectives of an institutional plan could be as follows:

1. to provide educational facilities for the growing population in different age-groups in the localities where institutions are located
2. to plan for improvement of the output quantitatively, economically and qualitatively. Improving the output quantitatively implies reduction of the incidence of wastage and stagnation, while improving the output economically means reducing the cost per pupil, which can be mainly done by the better utilisation of available

resources. Improvement of output qualitatively envisages the inclusion of such programmes in the plan as aim at improving the level of knowledge and skills of pupils making their moral, social and physical training more effective.

Basic Characteristics of an Institutional Plan

The basic characteristics of an institutional plan are:

- It is based on the principle of participatory planning which means that it is not a plan of the headmaster/principal alone, but of all teachers, students, parents and the local community.
- It is based on the felt-needs of the institution, and the problems faced by the school community.
- It seeks to utilise the available resources (both human and material) optimally both within the school as well as those available outside the school in the local community.
- It is flexible.
- It is scientific, as it takes into consideration all the facts and figures.
- It is a realistic plan of action from the stand-point of feasibility, and is not a 'charter of demands'.

Activity Sheet No. 2

Considering the situation prevailing in your institution, what would be the objectives of an institutional plan? Can you list some of the essential characteristics that a plan prepared by your school will have?

Collect
Collate
Discuss

Steps Involved in the Preparation of an Institutional Plan

The following steps are suggested to formulate an institutional plan:

1. take stock of the available physical facilities, instructional programmes, supervision, etc. and identify the deficiencies in each of these areas,
2. project future enrolment,
3. estimate physical facilities and staff requirements,
4. assess financial resources likely to be available from government and non-government sources over a period of time,
5. determine priorities and work out alternative choices in the light of assessed resources and future needs,
6. work out detailed programmes and projects to meet assessed needs,

7. estimate costs of expansion programmes and improvement after making due allowance for better utilisation of available resources and the likely escalation of costs,
8. phase out programmes and outlays according to priorities,
9. throw open the plan for wider discussion of its priorities and programmes by the local community,
10. finalise the plan in the light of public comments.

Activity Sheet No. 3

If you decide to introduce the system of institutional planning in your school, what are the steps that you would initiate? Give a list of such steps in the order in which they should be taken.

Collect
Collate
Discuss

Formulation, Implementation, Monitoring and Evaluation of an Institutional Plan

Since the idea of an institutional plan envisages the preparation of a plan not by the head of the school alone, but by teachers, students, parents, and the local community, it is expected that its implementation will be effective. It is necessary to call meetings of all concerned at regular intervals to identify needs and assess resources to meet identified needs. It may not always be possible to prepare a comprehensive plan for the all-round development of an institution at one stroke. But it should be possible to identify all conceivable needs of an institution, and decide upon certain priorities. Having decided upon priorities and taking into account the existing resources and additional resources that can be mobilised without much difficulty, it should also be possible to embark upon one or two projects or programmes and start implementing them as a beginning. To facilitate this, separate designs for such projects and programmes have to be prepared. The sum-total of all such projects should constitute an institutional plan.

While preparing the design for various projects the following factors have to be considered:

1. Need of and justification for the project
2. Specific objectives of the project enumerated in measurable terms, if possible
3. Details of personnel involved in the project
4. Time frame for implementation
5. Resources
6. Methods of monitoring and evaluation
7. Suggestions for improvement.

Each project will have to be split into different activities and information regarding the seven components mentioned above in respect of each of them will have to be incorporated in the projected design.

Activity Sheet No. 4

You may like to take up some projects or programmes for qualitative improvement of your institution. Prepare a list of such projects/programmes in order of priority. Indicate these specific objectives in respect of at least one of the projects.

Collect
Collate
Discuss

Evaluating the performance of an institutional plan is equally important. Continuous evaluation has to be done for each plan project or programmes in relation to its objectives. The experience gained through evaluation can be used for the purpose of feedback into planning at a later stage. Evaluation may normally be done by the school authorities themselves or by an external agency or by both.

Activity Sheet No. 5

On completion of the study of the module, the questions given below may be taken up as a recapitulation exercise:

Collect
Collate
Discuss

1. Define the concept of institutional planning.
2. Briefly highlight the areas which fall under the purview of institutional planning as against those coming under planning at the block, district, state and national levels.
3. Some items to be undertaken under an institutional plan are given in the module. Can you suggest other programmes relating both to quantitative expansion and qualitative improvement in the institution in which you are working?
4. What are the main features of participatory planning and management? How far are they practicable?
5. Explain the steps and techniques involved in the preparation of an institutional plan.
6. Institutional planning implies identification of open, hidden and potential resources of an institution to maximise its development. How far do you agree with this?
7. State the need and importance of monitoring and evaluation of an institutional plan. Draw up an outline for monitoring and evaluation of any one programme included in the institutional plan of your school.

Community Participation for Educational Development

Overview

This module aims at developing in teachers an insight into various aspects of community participation in educational programmes, and enhancing their ability to enlist community support for the programmes.

Here the 'community' means a group of people with common interests and needs, participating in promoting the cause of education within a particular area—village/locality.

You have been working for the promotion of education, both formal and non-formal, seeking community support and participation in this task. It has been the experience that programmes introduced through governmental agencies, often do not achieve their goals to the desired extent, without sufficient community support. This is applicable also to educational programmes. If the educational facilities have to be increased on the one hand, with the introduction of NPE, the qualitative change in education to meet the specific educational needs of the community also need to be brought about, on the other. This requires participation and involvement of the community.

Objectives

After completing this training module, it is expected that you will be able to:

- understand and explain the meaning and types of the community participation,
- appreciate the need for community participation in educational programmes,
- analyse the causes of insufficient community participation in educational programmes, and take remedial steps,
- identify the areas in which community participation may be required, and its feasibility,
- understand the role of school in maintaining better school community relationship and drawing latter's participation,
- understand some basic aspects of community participation, and
- understand and practice some methods of community contact to enhance community participation.

Learning Activities

Community participation has been emphasised in various documents, as well as by several eminent educationists. You have been working as a teacher for quite some time and must have tried to get community participation in various educational activities.

Generally, we tend to believe that help rendered by the community is community participation. But this is not always true. Participation has a wider connotation. Participation may also be of different types from the standpoint of willingness and desire of the community to participate in a programme. Let us try to understand these aspects better.

Activity Sheet No. 1

Think about the meaning of community participation and its types. Write them out on a separate sheet.

Collect
Collate
Discuss

It is not necessary that community members contribute on every occasion. Sometimes they just attend the functions, enthuse the children on the need for regular attendance, help you in educational activities, come to you for advice and depend on the school for community functions. This means, it is a two-way traffic. In other words, it is the process of sharing with each other.

A You may have noticed from your write up that community participation or involvement may be spontaneous at times and seem to be reluctant at other times. Participation can be categorised as:

1. Spontaneous—persons come forward on their own to participate without any external support or force,
2. Sponsored—persons participate because some mandate or official endorsements are issued. No force is applied, but it has been externally supported.
3. Compulsory—persons participate because it has been made compulsory. Often its violation may demand coercion.

Let us take a particular situation in which required community participation can be achieved through any of the above three ways. This will help in understanding these concepts.

Suppose, the community realises the need for a school and decides to raise funds for necessary materials and to send their children to school. This is 'spontaneous participation.' If the same community is persuaded to the above action by appropriate authorities, sometimes coupled with some incentives like a matching grant for building, increase in strength of teachers or other facilities for a school, it may be considered 'sponsored' participation. If the parents are forced to contribute to the

building fund because their children may not be allowed to continue in the school or their results be withheld or any other such action, this amounts to 'compulsory participation'. Similarly, when the authorities or members of a community direct parents to send their children to school, failing which they may be fined or lose some benefits or get some punishment, it would come under this category of participation.

In a democratic country like ours, compulsory participation is not desirable. Between spontaneous participation and sponsored participation, the former is most desirable. This will endure for a longer period of time as well as establish the ideal cooperative and participatory situation.

Having known the meaning and types of community participation; it is desirable that we know the need for community participation in educational programmes, more specifically, educational development programmes, which are community based, and get going with increasing success as they obtain the acceptance of the people and community. While working for the promotion of educational programmes, you may have come across such situations in which you realise the need for the community support. You could have tried to do something about it, but felt helpless as governmental support by itself was not sufficient. Let us try to recollect the situations, and discuss the need for community participation in educational programmes.

Activity Sheet No. 2

Reflect some situation from your experience where you felt the need for community support/participation.

Collect
Collate
Discuss

The school is an institution which receives children directly from the laps of their mothers and from the universal institution of the family to shape their personality in a continuum. The responsibility for educating the children has been shared by many traditional institutions in a given society, specially among tribal communities. The school of today is also an integral part of the society. It, therefore, has to have community support and participation.

The participation of the community is needed in all aspects of functioning of an educational institution, including planning and organisation of activities, material support, regular functioning, increasing the number of beneficiaries, supervision and helping educational development.

The NPE has, besides many other things, envisaged expansion of educational facilities to remove disparities in educational opportunities, making education relevant to the societal needs and decentralisation of management which are not likely to be achieved without the active participation of the community. It emphasises 'decentralisation' and the creation of a spirit of autonomy for educational activities as well

If you consider the efforts made by a school in enlisting community participation, you will find that most teachers complain of not having enough time for community contact, but if this aspect is considered necessary, some time must be squeezed in for it. The functions organised in schools are mostly made official with inadequate community involvement. However, at many places ideal participation of the community has been observed. We have already discussed in brief the need for community participation. Let us now discuss the feasibility of obtaining the community support in areas where it is most needed.

Activity Sheet No. 3

Enlist some important areas/aspects of educational programmes and institutional management in which community participation is needed.

Collect
Collate
Discuss

The areas in which community participation or help is needed relate to the academic, management and administrative aspects of the school. Let us synthesise our experiences:

1. If there is a proper dialogue with the community, it can substantially help in motivating and persuading the members to enrol their children in school. It can help in enhancing regular attendance of children, as well as their retention in the school. Sometimes, social pressure can also be put on parents by the community, to send their children to school.
2. The school is a part of the community. Therefore the latter can help in providing physical facilities, such as construction and maintenance of school buildings, desks, teaching aids, residence for teachers, particularly in rural areas. It can also contribute funds for various functions or help the school by providing free labour, specially in rural and tribal areas.
3. There are many skilled persons in the communities who can help the school in taking up activities related to work experience. Besides, in the absence of teachers, educated persons can come forward for voluntary teaching.
4. It has been observed that in villages where the community is education-minded and interested in educational activities, this helps the regular functioning of schools by solving unforeseen day-do-day problems, and also by close supervision and help.
5. The community helps in maintaining a congenial atmosphere in the school, by intervening in any dispute between the teacher and the parents or among teachers.
6. The administrative problems in the schools are also, often taken care of by the community. It has been observed that on such occasions, the *panchayat* or the community members help the school.

7. In academic aspects, the community can contribute by way of giving valuable suggestions in planning and execution of activities. One important contribution of the community is to provide authentic feedback to the school, regarding children's views about teaching and co-curricular activities in order to make necessary modifications in the teaching-learning processes.

There are many other aspects, in which the community can participate and help an educational institution.

As we discussed earlier, participation can be a two-way traffic. Now the role of a school in maintaining better school community relationships and attracting community participation may be examined.

Activity Sheet No. 4

Note down the activities that the school can undertake to maintain good relations with the community and obtain its participation.

Collect
Collate
Discuss

The school can play a positive role in enlisting community participation by bringing itself nearer to the community. The following are some important aspects in which a school can help the community:

1. The school may extend its role and become a centre for learning for every one in the community. It may not confine itself to only formal instruction to pupils but can also help community members in learning. The school may provide academic assistance to its members and encourage them to go in for further learning. It can thus become a community centre.
2. In most places, the school is the only place where people can hold meetings and functions. In such circumstances, the community can be helped with facilities such as the library and playground, without disturbing regular school programmes.
3. Teachers are considered knowledgeable and educated persons in the villages. People come to them for advice and guidance. They should be helped.
4. The role of the school may be enhanced as an agent of change in the community. It can help in collection and dissemination of new and innovative ideas relating to education, and also to other development programmes of the community. Sometimes it can help in guiding the people to approach the appropriate development departments to meet their needs.
5. The results of some activities of school children may be well displayed and parents may be invited to look at them. If it pleases them, they can see and learn from the experiments, demonstrations and other work being done in school.

Now that the areas in which the community can help the school and can be helped in return, has been analysed, let us synthesise our ideas. Some basic factors influencing community participation need explanation.

Activity Sheet No. 5

What, according to you, are the basic factors influencing community participation?

Collect
Collate
Discuss

As discussed, it appears that the following major factors, which influence community participation, can be listed.

1. The school and the community should work as co-partners which means, the community should be involved in the affairs of the school. Unless a sense of belongingness and sharing is created amongst community members, they will not feel sufficiently concerned to participate. The participation should be in the planning of all school activities and their management. This process is called 'participatory planning and management'.
2. There has to be an organisation at community level through which community participation can be channelised. In almost all the villages or localities a committee is formed for this purpose under different names, such as, the school committee, the coordination committee, the parent-teacher association, but such committees are not properly utilised for ensuring community participation. These have to be operationalised and activated.
3. You may have noticed that in places where the youth or younger generation comes forward to take part in educational programmes, the rate of community participation increases. This aspect needs further emphasis.
4. Those of you who are working in remote, tribal and rural areas, may have noticed the existence of some traditional institutions like youth dormitories. If these institutions are fruitfully utilised, the community participation rate will be accelerated.
5. The role of voluntary organisations in increasing community participation has been encouraging. Wherever such organisations exist, they should be approached for help.
6. It is desirable that a survey of the community/locality should be made to identify the community resources in order to know and expect the extent of community participation. It should include the survey of socio-economic status of the community, composition of social groups, human resources, village functionaries and reasons for non-attendance of students. These will help in mobilising community resources for school improvement and areas of co-operation between the school and the community.

In addition to the factors mentioned above, there may be others which could be taken care of in the process of attracting community participation. These factors can be identified and taken care of by the teachers, while interacting with the community.

Activity Sheet No. 6

You may have noticed that some of you get good community support while others find it difficult to manage. Let us try to analyse and identify some important methods of working with the community.

What, according to you, are some of the important methods of community contact and working with it to ensure community participation? Please write them briefly.

Collect
Collate
Discuss

A number of methods for community work have been identified. They are all useful. However, let us synthesise our experiences and note some common methods:

1. It is necessary that we should know the community well before entering into a full-fledged dialogue with it. When you are posted to a new place, try to understand the social structure, economy, cultural constraints, political organisation and other problems of the place.
2. Only knowing the community is not enough. It is more important to identify yourself with the community. Try to approach the community on an equal level and respect the community members.
3. It is important that you appreciate the problems of the community or of individuals instead of imposing your own ideas on them without knowing their problems. Such behaviour will bring you nearer to the community.
4. Instead of complaining about the children to their parents, positive suggestions to the parents will be appreciated by both.
5. The cooperation of emerging leaders, who are mostly the youth and educated persons, may be sought. The support of the elder members of the community is useful.
6. Attending social, religious and other functions organised in the locality helps the teachers to come closer to the community.
7. It is recommended that every school has a functioning 'parent-teacher association' or a coordination committee with similar objectives.

In addition to the methods indicated above, some other actions, such as, a sense of humour, a style of talking, respect for individuals play an important role in establishing rapport with the community. There are no ready-made solutions to the problem. It will greatly depend upon the judgement and the action of an individual or a teacher in a particular situation. Your role need not be confined to giving instructions in class. You have to assume the role of a guide and helper to the community. For secondary school teachers, a closer relationship with the parent-teacher association is recommended, in addition to activities suggested in this module.

School Complex

Introduction

The National Policy on Education 1986 (NPE-86) and its Programme of Action (POA) explicitly mentions that an overhaul of the system of planning and management of education needs to receive high priority. While considering machinery for effective implementation at the 'local level', the Programme of Action has laid special emphasis on promotion of school complexes. In the words of Programme of Action:

School complexes will be promoted on a flexible pattern so as to serve as networks of institutions and synergic alliances to encourage professionalism among teachers, to ensure observance of norms of conduct and to enable the sharing of experiences and facilities.

This module is an effort to detail some points for school teachers who will form the backbone of the "synergic alliance."

Objectives

After going through this module, you should be able to:

- Appreciate the concept of school complexes and the rationale behind the concept;
- get some ideas of the place of school complexes in decentralisation of educational planning and administration for improving the quality of education at the grass root levels;
- participate effectively in the functioning of school complexes;
- appreciate and utilise the facilities, services and support that could be made available for the participating school from the other schools in the complex and;
- interact and cooperate with your colleagues within the school complex for improving the teaching-learning process.

Policy Issues

Synergy stands for combining two or more "courses of action" on the assumption that such a combination will be more effective than pursuing them individually. For this, the National Policy on Education—1986 concentrates on the adoption of certain basic

management principles and processes. Those highly relevant to the planning and management of the school complex are:

Decentralisation

Participation

Autonomy, etc.

Elaborating the strategy to be adopted for this purpose, the Programme of Action assigns a new role to teachers and heads of institutions who work at grassroot level. It visualises the active participation of teachers in bringing about the desired educational transformation by:

Decentralisation

Since activities are better managed by the individuals who perform them, decentralisation becomes essential. For example, it is essential to allow the exercise of initiative by teachers with a view to enhance the relevance and improvement in the quality of education and to promote flexibility in the network of institutions.

Participation

For encouraging professionalism, sharing of experiences and facilities and observance of norms of conduct, the teacher needs to be involved in the management of a variety of services and activities, say, in laying down of rules and procedures and general issues of improving the institutional system.

Autonomy

It stands for freedom to innovate in teaching, developing linkages with concerned institutions as well as agencies in other productive sectors.

School Complex: Historical Background

Challenges of managing education call for a variety of innovative ways and means to overcome them. The concept of "School Complex" emerged as a result of this. The idea is not entirely new. It was put forward in a systematic manner by the Education Commission (1964-66). It had been in operation even before then, sometimes during pre-independence days in the state of Ajmer (which was merged later in the state of Rajasthan) and in some parts of the erstwhile province of Bombay, where neighbouring schools were linked with the middle school. In 'his way they formed a 'cluster'.

Kothari Commission (1964-66)

The idea of a school complex, in an organised manner with certain important strategies for implementation, was highlighted by the Education Commission (1964-66). After having a rough estimation of a rural area with a radius of five to ten miles, with

about one secondary school, five higher primary schools and 28 lower primary schools, and 80 to 100 teachers, the Commission thought that such a small and manageable group could function in a face-to-face relationship within an easily accessible distance. It suggested the linking of schools in two tiers as this would help in making a cooperative effort to improve standards. Organisationally the Commission envisaged:

The headmaster of the higher primary school should provide an extension service to the lower primary schools in his charge, and it will be his responsibility to see that they function properly. For this purpose, there would be a committee under his chairmanship (of which the headmaster of every lower primary school in his area would be a member) which would be responsible for planning and developing all the schools as a single 'complex'. The second tier would be a committee under the chairmanship of the headmaster of the secondary school (all headmasters of the higher and lower primary schools in the area being members) which will plan the work and in the light of which each higher primary school complex (with its associated lower primary schools) would carry on its work. This group of schools and teachers can be given a good deal of freedom to develop their own programmes, subject to general guidance of the inspecting staff.

It was in pursuance of this recommendation of the Commission that some states like Rajasthan, Madhya Pradesh, Uttar Pradesh, Bihar, Orissa, Haryana, Punjab, Gujarat and Maharashtra set up school complexes on an experimental basis.

School Complex: NPE-86 and POA

The concept is now being revitalised and is bound to gain momentum by developing new strategies and guidelines for its effective implementation. The National Policy on Education, 1986 and the Programme of Action further reiterate that the School Complex:

...will serve as the lowest viable unit of area planning and will form a cluster of 8-10 institutions in which different institutions can reinforce each other by exchanging resources, personnel, material, teaching aids etc. and using them on a sharing basis.

Establishment of a school complex will be of two types. In the first type, each middle school will be related to 3-5 primary schools that exist in its neighbourhood; in the second, 8-10 primary and middle schools in the area will be linked with a secondary/higher secondary school. However, a flexible approach will need to be adopted in sparsely populated, hilly and desert areas, where the number of schools in a complex will be much smaller compared to the number in plain areas. In densely populated areas, too, the number of schools in a complex will be slightly smaller than the average size of a school complex. Special emphasis is being placed on flexibility in the organisational design of the school complex.

When selecting a lead school, the following criteria will need to be borne in mind:

- (i) The number of feeder schools in the area, including non-formal education centres

for out-of-school children and for adults; (ii) Walking distance between the lead schools and non-formal education centres, which will normally be 5-8 kms; (iii) Adequacy in inputs in terms of staff, buildings, furniture, etc.; (iv) Academic standards; (v) Administrative performance; (vi) A lead school will normally be a school of at least five years standing. As part of the flexible approach the lead school can be in some places at primary level and in others at middle or secondary level.

To facilitate autonomous working it is expected that in course of time, school complexes, when fully developed, will take over many inspection functions which will bring about greater cohesion among the participating schools, head teachers and teachers.

School Complex: Points for Teachers

School complexes are expected to lead to improve planning and management of school education at the local level. The emphasis will be on raising the quality of education in that area in a formalised way. Some important points relevant to teachers are.

- (1) A School Complex will be able to solve the day-to-day professional problems of individual school teachers.
- (2) It will be able to make teaching effective by facilitating the exchange of ideas among teachers and schools at different levels by developing synergic feelings and sharing academic and other resources like library facilities, enrichment materials etc.
- (3) It will encourage teachers' meetings, workshops, demonstration lessons, film shows and seminars to raise the quality of education.
- (4) It will become possible to arrange exhibitions on Science, SUPW etc. in schools which are best equipped, within the school complex.
- (5) Teachers from schools will be able to pay visits to secondary, upper or lower primary schools as often as possible to share experiences or for providing guidance and support.
- (6) It will help in evolving academic leadership in teachers and sharing of experiments and innovations in the teaching/learning process at local level.
- (7) Provision of inservice education for subject-teachers will be arranged by DIET, but the school complex will help in the general orientation of teachers on subjects like value education, national integration etc.
- (8) It will be able to arrange for teachers from one school of the complex to go to another in case of short leave. This will be made by the principal of the lead school on a temporary basis for a short duration only. Heads of participating schools may also evolve their own division of responsibility on such matters.

- (9) If the teacher is transferred or sent out on training, the information will be sent by the District Education Officer to the heads and sub-heads of school complexes concerned.
- (10) It will be able to reduce the travelling distance for teachers on many counts through decentralisation of certain relevant powers to lead the school principal or other heads.
- (11) It will be able to sort out administrative issues like problems of leave reserve, delayed sanctions etc. at the monthly meeting of teachers with principals of concerned schools in which State Education Department and District Education Officer may become available.
- (12) It will enable teachers to assist the head in conducting examinations.
- (13) It will facilitate the formation of the norms of greater punctuality, regularity of teachers, their greater involvement in teaching and an improved academic climate.

Apprehensions of Teachers

Some teachers fear that school complexes may, in fact, lead to a shortage of teachers and teaching aids, a poor-condition of school building, a shortage of classrooms, furniture, absence of playgrounds etc. through sharing and bossing by headmasters. These apprehensions need to be removed. As indicated in the preceding pages the purpose of school complexes is to establish confidence to offset these difficulties through the proposed "synergic alliance."

Guidelines for Planners and Administrators

A number of experts have discussed at national level, the implementational aspects of school complex. Such discussions have helped to evolve a set of guidelines for educational planners and administrators connected with the formation and working of school complexes. These guidelines are not being included within the scope of this module. However, teachers need to be aware that the subject of school complexes is receiving the type of serious consideration that it deserves, at all levels of educational management.

Exercises

Activity I

Assuming that a school complex has been provided in your area, prepare a list of the needs of teachers at different tiers of the complex in respect of

- (a) Demonstration lessons for a subject of your choice.
- (b) Organising a meet on value education and national integration

- (c) Organising a cultural show based on group singing

Activity II

Prepare an action plan for academic cooperation between primary, middle and secondary schools within the framework of a school complex to raise the quality of education in your area.

Activity III

Suggest ways of using physical facilities by various schools within your school complex

References

The module is based on a number of documents like NPE-86, POA, Report of the National Commission on Teachers, NIEPA Guidelines for State Governments, and, discussions held in a sub-committee on the Management of Education. *Revitalising School Complexes in India* by Dr. R.P. Singhal (Concept Publishing Company, New Delhi, (1983) is a recent basic reference book. Further, *School Complexes: Formulation of Guidelines*, a Working Paper for discussion at the National Workshop on School Complexes (Dec., 1986, Pune) by Shri V.V. Chiplunkar and *Planning and Management of School Complexes*, a module prepared by Dr. C.L. Sapra and Shri S.S. Dudani, are other useful references.

Operation Blackboard

You are aware that the universalisation of elementary education has been one of the most important goals of educational development in our country. Provision of free and compulsory education to all children till they complete the age of 14 years is a Directive Principle of our Constitution. It is a part of the Minimum Needs Programme as well as the 30-Point Programme, 1986. The NPE 1986 has also given unqualified priority to universal elementary education.

The Policy has outlined the concept of a national system of education. It lays emphasis on elimination of disparities in the educational system and on improvement in the quality of school environment so that all children, irrespective of their socio-economic background have access to education of comparable quality upto a given level. The Programme of Action (POA) has recommended measures for improvement of the quality of education through reform of the content and process of education, laying down minimum levels of learning, provision of additional teachers and improvement in school facilities.

Objectives

On the completion of the module you will be able to:

- understand the concept and implementation strategies of the scheme 'Operation Blackboard'.
- know the role of Central/State Government in implementing the scheme.
- understand the role of the local community in making the scheme effective.
- appreciate the role you can play in making it a success.

Learning Activities

Operation Blackboard and Its Components

As you are already aware, the National Policy on Education—1986 and Programme of Action have recommended a number of schemes for the quantitative and qualitative improvement of primary education. One of these has been symbolically termed 'Operation Blackboard' (OB) which aims at the substantial improvement in facilities in primary education. Operation Blackboard lays down the minimum level of facilities to

be provided in all primary schools which have so far been established and it also prescribes the minimum level of funding for all primary schools to be opened in future.

There are three components of Operation Blackboard:

1. Provision of at least two reasonably large rooms that are usable in all weathers, with a deep veranda along with separate toilet facilities for boys and girls.
2. Provision of at least two teachers, as far as possible, one of them a woman, in every primary school.
3. Provision of essential teaching and learning materials.

Activity Sheet No. 1

You are teaching in a primary school or some of your colleagues are primary school teachers.

Bearing in mind the working conditions and existing school environment, list the essential teaching learning materials needed to make teaching more effective and interesting.

Collect
Collate
Discuss

Implementation

We all know that in spite of the constitutional directives and various efforts made during the past four decades, it has not been possible to achieve the target of universalisation of elementary education. A number of factors have led to this failure. Some of the major ones are lack of proper school buildings, an insufficient number of teachers in schools and lack of teaching learning material. The scheme of Operation Blackboard aims at providing these to each primary school.

As it is not possible to provide these facilities to all schools at the same time, owing to financial constraints, the implementation has been phased out over a period of three years. During 1987-88 only 20% of community development blocks and municipal areas in all states/ uts are being covered; another 30% blocks/municipal areas will be covered during 1988-89; and the remaining 50% during 1989-90.

The coverage of Operation Blackboard has to be extended to all primary schools run by the government, local bodies, panchayat raj institutions.

For the collection of information with regard to the requirements of school buildings a second teacher in single-teacher schools and essential materials, the States/UTs have been asked to conduct surveys of existing facilities according to a proforma especially developed by NCERT for this purpose. Most States/UTs have initiated work in this regard.

Role of Central and State Governments in Implementation of Operation Blackboard

For the effective implementation of the NPE-1986, the Government of India has

undertaken a greater responsibility especially in relation to schemes aimed at the qualitative improvement of education. For the implementation of Operation Blackboard too, responsibility is being shared by the Central and State Governments.

(1) *Construction of Buildings:* Funds for construction of buildings have to be arranged by State Governments from the schemes for which funds have already been provided by the Government of India. States have been asked to plan the use of funds provided by the Eighth Finance Commission for construction of school buildings. A decision at the highest level has also been taken to give high priority to the construction of primary school buildings by the judicious allocation of funds provided to states under the National Rural Employment Programme (RLEGP).

The following clarifications have been made to the States regarding the construction of school buildings:

- (a) each of the rooms to be constructed should be 30 square meters in area and the depth of the verandah should be approximately 9-10 feet. Even if there are two rooms in existence at present whose area is less than the recommended area, new rooms should be constructed.
- (b) Separate toilets for boys and girls must form a part of construction activity. Toilets should be so constructed that they inculcate desired toilet habits among children.
- (c) The design of the building should provide scope for expansion. Every effort should be made to utilise local materials to keep the cost low. The buildings should be adequate without being ostentatious, and should merge with the environment. It should also be ensured that there is built-in space for storage of equipment. Well-plastered blackboards should also form part of the structure itself in the rooms, as well as at both ends of the verandah.

The role of the local community has been defined in the scheme as follows:

- (a) Necessary land for construction of school buildings, including land for games and sports has to be provided by the local community.
- (b) The local community, preferably Village Education Committees, have to give a formal undertaking that they will accept responsibility for repair and maintenance of the building.
- (c) The local community has also to accept responsibility for an appropriate fencing a round the school compound.

Activity Sheet No. 2.

You are aware that merely defining the schemes does not bring about desired results. As a school teacher, what steps would you initiate to get the maximum and continuous cooperation of the local community in implementing this scheme?

Collect
Collate
Discuss

(2) *Provision of a Second Teacher in Single-Teacher Schools:* Though efforts have been made over the past years to reduce the number of single-teacher schools, yet there is a large number of schools in the country which are being managed by single teachers. Under Operation Blackboard the State/UTs have been asked to appoint a second teacher in all single-teacher schools. The Government of India will give financial help to the States for payment of the salary of the second teacher during the Seventh Five-Year Plan period.

For the implementation of this component:

- the State Government has to give a categorical assurance that all new primary schools to be opened will be provided with two teachers.
- to the extent possible, all new teachers to be appointed will be women. It is advisable for every school to have at least one woman teacher. In case of any difficulties in rural areas, the second teacher may also be male, but a corresponding increase in the number of women-teachers should be made in urban areas in other localities.
- spatial considerations need to be borne in mind in the appointment of teachers. If trained teachers belonging to remote areas are available, they should be given preference without disturbing the broad policy regarding the appointment of teachers. Likewise, preference should be given to trained teachers belonging to SC/ST.
- In cases where persons trained 2-3 years prior to the appointment are appointed they should be provided with a suitable refresher course (approximately of one month's duration). Necessary preparations for this purpose should be made immediately. Materials prepared by NCERT for a massive teacher training programme should also supplement other sources.

Activity Sheet No. 3

During this training period, you have been acquainted with the new content and processes of primary education. List the areas and activities of the training refresher courses that should be organised for newly-appointed teachers.

Collect
Collate
Discuss

(3) *Minimum Essential Learning Materials:* The minimum essential materials in a primary school, that should hold good for all schools throughout the country, have been spelt out and the list is given at the end. The States/UTs may make some departure from this, provided they give sufficient justification for it, and it does not lead to any increase in cost. Funds for purchase of these materials will be provided by the Central Government on a 100% basis up to the end of the Seventh Five-Year Plan. The liability thereafter will be transferred to the State Government.

With reference to the implementation of this component, the following guidelines have been developed for the States/UTs:

- (a) The material purchased under Operation Blackboard should be of good quality. Norms and specifications in respect of each item are being worked out by NCERT. Meanwhile, the State Governments may work out their own specifications, which can be used for purchase of material during 1987-88.
- (b) MHRD in collaboration with NCERT and the Bureau of Indian Standards has taken steps to work out unit costs of standard quality material which may be applicable in practically all parts of the country. By and large, central assistance under the scheme will be restricted to the unit cost, and the state governments will be expected to adjust their estimates within these limits.
- (c) Work experience programmes in upper primary schools and secondary/higher secondary schools should be modified to manufacture as many items, required under Operation Blackboard as possible. Even polytechnics and ITI's should be encouraged to set up manufacturing units as envisaged under the 'earn-while-you-learn' project.
- (d) The responsibility for replenishment of materials will have to be borne by the State governments or local bodies. Funds for this will have to be provided in a systematic manner from the beginning of the Eighth Five-Year Plan.
- (e) Teachers will need to be oriented to build an atmosphere in which they make proper use of the material provided and also improvise instructional material on their own initiative. This component may be incorporated in all programmes of pre-service and in-service teacher education programmes.
- (f) SCERTS/SIEs should also develop simple booklets to facilitate the proper use of material.

Activity Sheet No. 4

You have examined the list of essential materials to be provided to the single teacher schools under this scheme. List the ways in which you will ensure the maximum benefit to the teacher and the children from this material.

Conclusion

After reading this module you have come to know that OB is a centrally-assisted scheme. No separate funds have been provided under it for the construction of primary school buildings. In rural areas it has to form a part of NREP, RLEGP and other special area development schemes such as Tribal Sub-Plans, Hill Areas Development Programmes, Border Area Development Programmes etc. Till the end of the Seventh Five-Year Plan, the Central Government has undertaken the responsibility of funds on a 100% basis for the appointment of a second teacher in single teacher schools and for

the purchase of essential equipment. This responsibility will be transferred to State governments after that. The present responsibilities of the States also include:

- provision of contingency @ Rs. 500 per annum to every primary school.
- provision of land and fencing of schools.
- an undertaking regarding repair and maintenance of school buildings.
- an assurance that in future all sanctions of primary school teachers and equipment will be provided at least at the level envisaged under Operation Blackboard.
- provision of funds for replenishment of equipment

The state governments will also have to take steps for detailed micro-planning for the universal enrolment and retention at the elementary stage which is the basic objective of Operation Blackboard. Measures will also need to be taken to involve teachers and the local community, not only in planning and implementation of Operation Blackboard, but also to create an upsurge for the universalisation of elementary education. It may also require a strengthening of the administrative structure.

Scheme of Operation Blackboard

List of Essential Facilities at the Primary Stage

		Number	Amount in Rupees
I.	<i>Teachers' Equipment</i>		
	(i) Syllabus	01 set	05
	(ii) Textbooks	One Primary Set	25
	(iii) Teachers' Guides	—do—	15
II.	<i>Classroom Teaching Materials</i>		
	(i) Maps—District ()	One each	175
	State ()		
	Country ()		
	World ()		
	(ii) Plastic Globe	01	100
	(iii) Educational Charts (Health, Social Studies, Language)	One Set	90
III.	<i>Play Materials and Toys</i>		
	(i) Wisdom Blocks (Construction of Different Designs, Patterns, Objects etc.)	3 Sets	120
	(ii) Bird and Animal Puzzles (Jigsaw Puzzle)	3 Sets	60
	(iii) Toys (Dolls, Human Figures, Animals, Science Toys.)	2 Sets	300

IV. Games Equipment

(i) Skipping Rope	10	60
(ii) Balls—Football	02	70
Volleyball	02	70
Rubber Balls	10	50
(iii) Air Pump	01	35
(iv) Ring	05	50
(v) Swing Rope with Tyre	01	35
V. Primary Science Kit (of NCERT)	01	400
VI. Mini Tool Kit (of NCERT)	01	300
VII. Mathematics Kit	01	300

*Teachers' Equipment**Number**Amount in Rs.*

VIII. Books for Library

(i) Reference Books—Dictionaries, Encyclopaedias	02 01	100 100
(ii) Children's Books (at least 200) (NBT, Children's Book Trust, Nehru Bal Pustakalaya and Others)		1600
(iii) Magazines, Journals and Newspapers for Teachers and Children (One Newspaper, One Magazine and One Professional Journal)		450
IX. School Bell	01	50
X. Musical Instruments		
Dholak or Tabla	01	100
Harmonium	01	500
Manjira	02	50
XI. Contingency Money with Teacher		Recurring
(i) Mats and furniture for Students and Teachers (Chair and a Table for One Teacher plus Large Boxes)		
For teachers	02 sets	700
Mats	—	375
Boxes	02	300

XII. Blackboard, pin-up board (canvas)*	02	400
	02	50
		30*
XIII. Chalk and Duster		30
XIV. Water Facility (Pitchers, Glasses and Ladle)		100
XV. Trash Can	10	50

 Rs. 7,215/-

Improvising Teaching Aids

Overview

Out of 600,000 primary schools in the country, 75% are in the villages. These rural schools suffer badly for want of adequate funds to procure the equipment and teaching aids available commercially. Improvised aids with the simple materials available in the immediate school environment, by involving the rural artisan, if need be, are relevant to make learning effective. It is important for teachers to know how to prepare, use and evaluate the improvised aids so that their classroom interaction becomes meaningful. This module deals with learning problems faced by rural school children and ways and means of fulfilling their educational needs, through the improvisation of teaching aids.

It is for teachers to know whether there is any need for the aid, which depends on the learner's need. Accordingly learning activities can be planned while considering their accessibility and relevance in a given situation. The learner feels interested only when he participates actively in the learning process. Learning activities for improvising aids involve identification of difficult concepts, inventory of material available in the environment, preparation of aids, conducting experiments and activities with the involvement of children, teachers and the community, evaluating aids in terms of their effectiveness and modifying such aids from time to time.

Objectives

After completion of this module, you will be able to:

- Describe the material available in the environment for the preparation of simple aids for the better comprehension of difficult concepts.
- list local resources such as the local artisans/craftsmen, carpenters, ironsmiths etc. and the local materials such as bamboo, match sticks, shells, seeds of fruits, used cycle spokes, valve tubes etc.
- understand the value of improvised aids in education.
- think about the ways of obtaining help from local artisans and talented persons in making improvised aids.
- prepare at least five aids with the write-up for each aid, indicating the preparation process and its use.

What is Improvising Aid?

Improvising aid is a term which refers to aids prepared with simple materials, costing

very little, by involving the children and the artisans. India has a rich art-and-craft tradition in an environment of material surroundings such as trees, plants, rivers, ponds or sea.

There are some inexpensive and waste materials available locally such as empty matchstick boxes, fused electric bulbs, cans, seeds and shells etc. Improvising aids include charts, models and other inexpensive aids which could be prepared easily with little or no money to make learning effective, comprehensive and fascinating.

Types of Learning Activities

You have been teaching students for some time. You may have come across certain concepts or sub-concepts in which you face the difficulty of teaching students with varying mental capabilities without models, charts, experiments or some other aids. List such concepts or sub-concepts which the children find difficult to learn. Also mention the aids or activities which you are conducting in your school. There may be some models in your school. Have you procured these aids from the market or made them in the school? Mention such models or charts. Are you using such aids? Do you conduct experiments to explain the concepts, or are these explained mainly through books?

The teacher is the key person in the entire preparation process of improvised aids. He may involve the artisans and the children while preparing aids. He has to take the initiative in procuring the material, give an idea about the aid required and plan its preparation or conduct the experiment or activity in a scientific way.

It is important to understand before the preparation of aids how to explain the concepts which cannot be clarified through books. The children find it difficult to learn concepts/sub-concepts without the use of aids. Sufficient funds for such aids may not be available in the neighbourhood. You may lack the confidence to use ready-made aids in the class because you are not involved in the preparation process. List the causes which deter you from using aids for clarifying concepts. Check your resources in terms of equipment, material, help, time and the money required.

Consideration for Preparing Improvised Teaching Aids

Categorise the concepts subject-wise. Some causes are common and could be easily identified by you. These are mainly:

Nature of Subject and Inadequate Training

Very often you may feel that the present curriculum is heavily loaded and that you are not in a position to complete the syllabus. In such a situation the introduction of teaching aids, where necessary, will help you to teach more in the allotted time. You may not have studied science as a subject but you are supposed to teach all the grades at primary level. Difficult concepts in science and mathematics can be identified with ease if you understand science and simple mathematics.

Inadequacy of Funds and General Conditions

The contingent money given to a primary school per year is very small, out of which you have to procure chalk, dusters, brooms etc. and there is hardly any money left to buy the material for teaching aids. The school has often one room and there may be situations in which you have to teach more than one class. The school system has hardly any teaching aids. There is also the question of maintaining the aids without proper storage facilities in the school. The administrative system seldom encourages the use of such aids.

Facilities for the Use of Aids

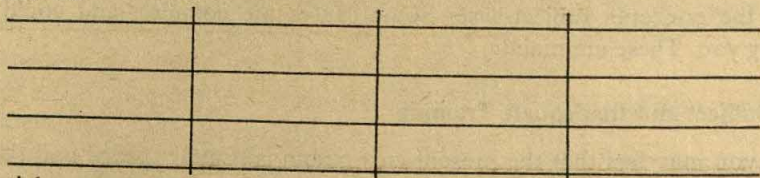
You may feel reluctant even to use such basic aids as the blackboard etc. adequately for lack of facilities like blackboard paint or a duster etc. You may like to do or make something with your own hands. Do you feel hesitant to interact with artisans or craftsmen, even if they want to make an aid for the school? Are you hesitant about entertaining questions from children, from the latent fear that such questions are at times difficult for you to answer?

Place of Teaching Aids in Learning

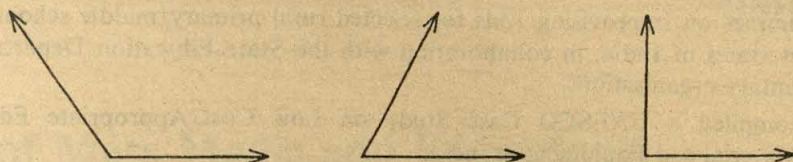
Teaching Aids, in the present educational system, have a very low priority, though these promote learning by actual participation. Could you devise ways and means to motivate the preparation and use of improvised aids? It may be necessary to involve the community and define a time-slot for activities/experiments in science and mathematics.

Some Simple Examples of Improvising Aids

Explain the concept of 'Expansion of Metals on Heating' with the help of waste materials like bicycle spokes, used hacksaw blades, toothpaste caps, candle and match sticks. Similarly, with broomsticks, you can concretise the concept of multiplication by placing the sticks as shown below. The broomsticks placed horizontally and vertically will make cross-sections which can be counted. The number of cross-sections would be answer of $3 \times 4 = 12$.

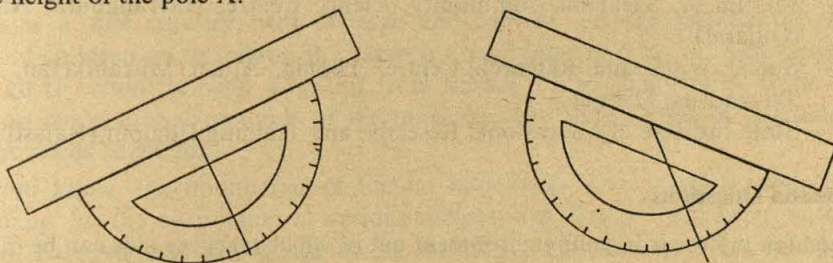


Broomsticks can also be used to explain geometrical concepts like the obtuse angle, acute angle and right angle. Newton's disc just needs some white cardboard water colours, brush and thread. Concepts of 'Place Value, Addition and Multiplication' could be explained with the help of 'Ganak' made with simple materials like bicycle spokes, a wooden platform, rectangular cardboard piece, sticks of colour paper, beads



etc. Geometrical shapes could be explained to the children with matchsticks and bicycle valve tubes. The concept of “Expansion of Gases on Heating” can be concretised with a simple demonstration. With a fused electric bulb and after removing its inner contents, you may fix a balloon to the mouth of the bulb. When heat is applied to the bulb, the balloon will burst.

To measure the height of trees, houses, poles etc., you just require the protractor (could be improvised out of cardboard also), a wooden rod 25cmx2cmx2cm, thread 25cm, a small nail and a small weight. Glue the protractor to the wooden rod. The flat edge of that protractor should lie along one edge of the wooden rod. Drill a small hole through the protractor at the point where the 0° and 90° lines meet. Press a nail through the hole, and hammer it a little way into the wood. Tie a small weight to the thread, and bind it with the nail. Estimate the height of the object (pole), say, X metres. Look along with the length of the wooden rod at the top of the object (Pole). Move a few steps forward or backward so that the downward thread makes an angle of 45° with the protractor. Measure your distance exactly from the pole. Now you know the height of the pole X.



A magnifying glass for teaching science can be made easily by pouring water into a fused bulb. A voltameter for teaching the electrolysis of water can be made by using a coconut shell and carbon rods from a used dry cell. Similarly, you can think of making effective use of improvised material in developing aids for teaching.

Activity

Suggest an improvised aid that you can prepare using the raw materials available in your locality. List the materials required and the expected cost of production. Explain the procedure for preparation and the context in which it is used.

Work Done on Improvising Aids

—The Central Institute of Educational Technology of N.C.E.R.T.—have organised a series

of programmes on Improvising Aids for selected rural primary/middle school teachers in various states of India, in collaboration with the State Education Department and rural voluntary organisations.

- compiled a UNESCO Case Study on Low Cost/Appropriate Educational Material and Equipment in India.
- printed papers on Improvising Aids and a series of 20 charts.
- prepared a tape slide programme on the Educational Technology of Improvising Aids.
- printed an illustrated Manual of Low Cost Aids on 25 concepts of Science and Mathematics. The manual was tested with teachers in formal and non-formal situations
- a series of 12 programmes on Improvising Aids were produced recently on video. These programmes are being telecast to the INSAT States and
- Keith Warren's book *Preparation for Understanding* on Improvising Aids has been translated in to Hindi by CIET and printed by UNICEF.

Copies of the report, papers, manuals and books are available in the CIET, NCERT (I.P.Wing), 10-B Ring Road, N.D.-110002

Contact the CIET to share your experiences. The names and addresses of some voluntary organisations/institutions, doing pioneering work in this area are:

- Kishore Bharati, Palia Piparia Village, Via. Bankhedi, Distt. Hoshangabad (M.P.).
- Vikram A. Sarabhai Community Science Centre, Navrangpura, Ahmedabad (Gujarat).
- Social Work and Research Centre, Tilonia, Ajmer/Mitraniketan, Velland, Trivandrum District.
- State Institute of Educational Research and Training, Udaipur, (Rajasthan).

Discussion Questions

1. List ten materials in your environment out of which teaching aids can be made.
2. Can you give ideas to artisans for the preparation of ten aids? If so, how?
3. Do teaching aids adequately plead for learning by actual participation?
4. Judging from the cost involved in the preparation of aids, do you feel these can be prepared in the Indian school system on a mass scale?
5. What are the four major considerations for preparing improvising aids for effective learning?
6. Can you think of reasons that hinder the use of improvising aids by a teacher?

Use of Mass Media and Educational Technology in Education

Overview

This module is to help you understand what is meant by the term 'Mass Media', what is the role of mass media in education, and how you can use various mass media effectively in and out of school situations to improve the quality of education.

In early times, the teacher was the only medium of communication for children. He taught his students orally. Later, with the advent of printing technology, books were available. The books have proved to be of great advantage to teachers and children alike in the teaching-learning situation. Newspapers are becoming accessible to an increasing number of people, and they play an important role in developing awareness and providing information about things and happenings. Now, for quite some time other mass media like radio and television are also increasingly used in education in India. These media can be of further help in improving the quality of education.

Ours is a vast country, with a large and rapidly growing population. A large number of children go to school. But there is a very large number of children who still do not go to school or who drop out from school in the early stages. If we depend merely on conventional methods of teaching, we may not succeed in reaching every child who needs education.

As you know, the boundaries of human knowledge are expanding and changing very rapidly. So the curriculum in various subjects has changed and been periodically up-dated. However, the knowledge of the teachers themselves may not change automatically to transact the new curriculum. The mass media can be of great help in orienting and re-training a large number of teachers simultaneously in the new pedagogy and content of teaching.

However, this requires specialised knowledge and skill on the part of the teachers before they can use these media effectively for their own benefit and the benefit of the children. Here we shall discuss the techniques of using radio and television effectively in the classroom. The objectives of this module are:

Objectives

After completing this module, you should be able to:

- classify various instructional media into meaningful categories.
- appreciate the advantages of using mass media in education.

- acquire necessary skills in using radio and television in education.
- prepare a feedback report and send it to the concerned agency.

Activities

During your training and career as a teacher you must have learnt about, and used various instructional media in the teaching-learning process. Can you recollect various instructional media and list them?

Activity Sheet No. 1

List various instructional media on a separate sheet.

Collect
Collate
Discuss

Now you have a list of various instructional media. Go over the list again. You will find that all these media can be classified into different categories such as print and non-print media; zero cost, low cost and high cost media; projected and non-projected media.

Activity Sheet No. 2

Categorise various instructional media

Collect
Collate
Discuss

One comprehensive categorisation of various instructional media could be:

Print Media

Books,
Workbooks etc.

Non-machine devices which do not require the use of a machine:

Toys
Games
Charts
Maps
Graphs
Cut-outs
Pictures
Flash cards
Flannel-cards
Models
Specimen.

These can be bought commercially but can also be made by the teacher and the children using non-cost/low-cost, locally-available materials.

Machine-operated devices which require the use of a machine:

Slides
Filmstrips
Overhead transparencies
Audio-tapes or cassettes
Video-tapes or cassettes.

Mass Media

Films (16 mm, 35 mm)
Radio
Television

In this module we will talk mostly about radio and television, but also about audio and video cassettes.

You must have some experience of using radio and television in the classrooms, or must have heard about these from your colleagues.

You may be aware that radio has been used in our country for educational purposes for about fifty years now. A number of Akashvani stations (about forty-four) regularly produce and broadcast programmes for schools. A number of other Akashvani stations (about thirty-four) relay these programmes to make them available to a large number of schools in remote parts of the country.

The programmes for schools produced by the Akashvani stations are for the following categories of audiences:

- Teachers
- Children of higher secondary classes
- Children of secondary classes
- Children of primary classes
- General enrichment programmes for young children
- Preparatory lessons for secondary and higher secondary students near examination time.

Some Akashvani stations broadcast programmes in support of the correspondence courses offered by the Universities.

An Akashvani station may broadcast all or some of these programmes.

The programmes are generally broadcast in the morning, and repeated in the afternoon for the benefit of the schools in the second shift.

The themes and topics of the programmes for different audiences are annually planned by the Akashvani Stations concerned. They have set up Advisory/Consultative Panels for the Purpose in which the State Department of Education and other state educational agencies are represented.

It is mostly the Akashvani stations which produce educational programmes. However, some educational institutions like NCERT, New Delhi, CIEFL, Hyderabad and

CIIL, Mysore also produce educational programmes, which are broadcast by various stations of Akashvani.

Most Akashvani stations or the State Departments of Education print the annual schedule of the broadcast of the school programmes and distribute it among schools registered with them for their information.

Activity Sheet No. 3

Find out the names of Akashvani station(s) in your state which broadcast school programmes. Also find out the nature and types of programmes broadcast by the station, and the time of broadcast of the programmes. Find out which agency prints and distributes a schedule of school broadcasts. Contact them and request them to put you on their mailing list.

Collect
Collate
Discuss

Quite a large number of schools in each state have procured radio receiving sets for listening to school broadcasts. In some cases, sets are provided by the Department of Education. In other cases, schools buy sets out of their funds. Also, one could consider getting a set as a donation from a voluntary organisation, a public association or a parent-teacher association. The State Educational Technology Cell/State Institute of Educational Technology advises the schools on the types of sets suitable for the purpose.

Activity Sheet No. 4

Find out the possibility of procuring a radio set for your school, if you don't already have it.

As with radio, television has been used in education in our country for the last 25 years, though on a comparatively limited scale. Television was first used in the schools of Delhi in 1961. The scheme was later taken up by Doordarshan Kendras of Bombay, Madras and Srinagar. These Kendras telecast programmes mostly for children at middle level and above, but some do it for primary schools too.

To reach a large number of children at elementary level in remote rural areas, the first attempt to use TV on a mass scale was made by using an American Satellite, namely, ATS-6, in 1975-76 during the Satellite Instructional Television Experiment (SITE). SITE was conducted for a year in 2,330 villages scattered in 20 districts in six states, namely, Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa and Rajasthan. The children watched a 20-minute programme every day during school hours. The satellite was also used for the orientation of primary school teachers in science for 12 days during the autumn vacations of 1975, in which more than 24,000 teachers

participated. The training was repeated with a different group of teachers during the summer of 1976.

After SITE, school programmes continued to be telecast for a limited number of schools, using ground transmitters at Jaipur, Raipur and Muzaffarpur.

Now television is used on a mass scale in the country for the qualitative improvement of elementary education, after acquiring our own satellite, viz, Indian National Satellite (INSAT) in April, 1982. Starting with Andhra Pradesh and Orissa, the educational television service was later extended to Maharashtra, Gujarat, Uttar Pradesh and Bihar. More than 6000 TV sets have been provided by the Government of India to schools in selected districts of these states.

Beginning in mid-October, 1984 educational television programmes have been relayed by all high power transmitters (HPTS) and low power transmitters (LPTS) in these six states, and also in the Hindi-speaking States of Rajasthan, Madhya Pradesh, Haryana and the Union Territory of Chandigarh. The State Governments are taking steps to provide for additional community receiving sets in the schools falling within the coverage area of the respective transmitters. As you know there are now more than 200 TV transmitters in India, covering 70% of the population.

Activity Sheet No. 5

Find out if your school lies within the area of the transmitter which relays ETV programmes and also the time of telecast of these programmes. The local Doordarshan Kendras and the State Institutes of Educational Technology/State ET Cell can be of help to you in this respect.

Collect
Collate
Discuss

Under the scheme, there is five-day a week transmission in the morning for 45 minutes for each state, comprising two separate chunks of 20 minutes for 5-8 and 9-11 year-old children. There is a programme for teachers once a week, on Saturdays. You may ask why when a number of other good devices like blackboards, books and charts are not fully available to support the teaching-learning process, the country is investing so much money and effort in pushing mass media in education.

Activity Sheet No. 6

Think of possible advantages of using radio and television in education, and make a list.

Collect
Collate
Discuss

Experience all over the world shows that when appropriately used, radio and TV offer great advantages in education. As you know, the more children use their senses, the higher is their learning capacity.

Radio appeals to the ear. It can, therefore, be of particular help in the development of language, music and learning historical events through dramatisation. TV is a still more powerful medium, as it combines sound with moving visuals. TV can be of particular help for the demonstration of skills, clarification of difficult concepts, inculcation of values and attitudes and conveying factual information in an interesting way. Radio and TV both help to bring the outside world into the classroom, and expand the horizon and experience of the child, as other routine aids do not.

There are thus various advantages in using radio and TV in education, but both media have certain limitations. Can you think of some limitations from which these media suffer?

Activity Sheet No. 7

Think of the limitations of educational radio and TV

Collect
Collate
Discuss

You have guessed right. These media have the following limitations:

1. There is one-way communication; the listener/viewer cannot ask questions and get clarifications on the spot.
2. The listener/viewer must move with the speed of presentation; one cannot go back or ask for repetition of the ideas. We can always turn back and move forward while reading a book, but cannot do so in radio and television presentations.
3. The mass media-programmes are produced, keeping a large section of the audience in view. The programmes may not exactly relate to the experience of children of a particular community, living in a particular environment. We know that children learn better and faster when a given idea/information is related to their experience and immediate environment, but radio and TV programmes may not always fulfil this requirement to the extent necessary.

Fortunately, there are ways of overcoming or reducing these limitations. Can you think of some ways of filling these gaps?

Activity Sheet No. 8

Think of ways of overcoming various limitations of educational radio and TV.

Collect
Collate
Discuss

It is, because of these various limitations of mass media that your role as a facilitator and guide comes in. You can fill these gaps first by motivating children to listen to radio and watch TV and learn from them. The children depend on you to switch on the receiving set. Inculcate the habit in the children, of using these media regularly.

Second look at the schedule and go through the notes, if available, in advance to refresh yourself about the content and scope of a forthcoming programme. Ten minutes before transmission time, undertake pre-broadcast discussion with the children to recapitulate previous programmes, to motivate and prepare them mentally to receive the forthcoming programme carefully.

Listen or watch the programme with children. Observe their reaction to various segments of the programme.

After the programme is over, discuss, clarify the doubts of the children, and relate the programme to the class work, their past experience, and environment. Suggest to them some activities which may help a follow-up of the programme.

Your presence during the transmission is also essential to ensure discipline and orderly behaviour among the children. Leaving them on their own during the broadcast, as some teachers tend to do, is not a good thing.

Moreover, some teachers feel that they also benefit by listening to, or watching the programme designed for children. They learn many new things from these programmes.

Gradually you will find that children develop the necessary skills to receive the programmes and be benefitted. Later, this will help them to use these media for life-long education.

You have yet another role to play. This is to provide feed-back to the programme producers to enable them to improve upon the quality of programmes and to make them more relevant, meaningful and enjoyable for the children. Fill the feed-back proforma in respect of each programme, and send these to the agency concerned.

Another equally important task for you is to see that the receiving set remains in order. As soon as some fault develops, take immediate steps to have the set repaired. Some states have a special set up for maintenance of sets, such as the Rural Broadcasting Unit in Maharashtra and Gujarat. In some other states, private agencies are given a contract for maintenance of sets. All you have to do is know its mailing address and inform them in the event of a fault's occurring.

Finally, it is important for you to understand that the seating arrangement of the children before a radio or TV set has to be different from that of the classroom. While listening to radio, children should be asked to sit in a semi-circle or a circle round the radio set.

The ideal arrangement for the children is to sit before the TV set would be within an angle of 30° . But if the audience is large, it could be extended to 40° . Also, ensure that there is a distance of about 6-7 feet between the first row and the set. Sitting too close to the set is harmful to their eyes. The last row should not be beyond 25 feet from the set.

The TV set should be slightly higher than eye level of the sitting children i.e. at the height of 2 to 3 feet, if the children are sitting on the floor.

Unlike the cinema hall, the TV room may not be darkened. Let there be some light in the room. But this light should not fall directly on the TV screen. Keeping the doors and windows closed may cause suffocation and physical discomfort to the children particularly during the summer months.

As a teacher, you thus have an important role to play in the effective utilisation of mass media in education. Without enough initiative, motivation and skill on your part, the children will not be benefitted by them.

Questions

1. What are the advantages of using mass media in education?
2. What type of media support can you get in your school for instructional purposes?

Needs and Problems of Children

Introduction

It is important for teachers to have an insight into the needs of children because it helps us to understand the “why” of child behaviour. A child behaves in a particular way because of his felt need. The infant cries and thrashes his arms and feet about probably because he is hungry and needs food. Similarly, a primary school child goes about with other children and behaves according to the demands of the group because he needs approval from them. At every stage of development, children have needs natural to that stage and their behaviour is determined by these needs. If these needs are not satisfied, children are likely to develop problems. Therefore, as teachers, it is important that we understand the needs of children at each developmental stage, and thus get to know the causes of children’s behaviour so that we are able to help them cope with problems in their day-to-day life.

Objectives

After completing the module you should be able to:

- understand the needs of primary school children
- list the common problems they are likely to face
- understand the nature of these problems
- work out simple strategies to help children and parents cope with these problems.

Learning Activities

Based upon your long years of experience as a primary school teacher, would you like to reflect upon the characteristic needs of primary school children.

Activity Sheet No. 1

List the needs of primary school children which you think are characteristic of their age.
--

Collect
Collate
Discuss

Go through your list. Can you think of classifying these needs into any specific categories, such as physical, social or emotional needs. For example, need for food is

a physical need, need for approval is a social need or need for affection is an emotional need.

Activity Sheet No. 2

Write down the activities that a primary school child does to fulfil his/her needs.

Collect
Collate
Discuss

Think of the children in your class. Taking need by need, consider the ways in which the children are likely to behave when they have to meet these needs. For example, if the child wants the teacher's attention, he/she may put his/her hand up, call out loudly "Sir, Sir" or jump up and down in his seat.

Activity Sheet No. 3

Give two examples of activities in which your students will be engaged, one academic, the other non-academic. List the needs which may be acting on the student in the course of each activity.

Collect
Collate
Discuss

When you listed the needs acting on the child while engaged in an activity, you must have found that one activity fulfils more than one need. For example, take a non-academic activity like participating in a football game. It fulfils the need for physical activity, for approval and need for victory, for independent action etc. Some needs are stronger than others, while some may conflict with others.

Activity Sheet No. 4

If the needs of the child are not fulfilled how do you think that he/she will behave?

Collect
Collate
Discuss

Suppose a child in the class is not able to have his/her need for approval fulfilled, he may try to push himself forward into the limelight and catch someone's attention. He may also turn aggressive and demand approval, or he may withdraw into a shell and turn into a meek, timid person. A timid, shy withdrawn child at times goes unnoticed because he/she presents no problem to the teacher. However this child needs as much help as the aggressive child to cope with his/her problems. In a nutshell non-fulfilment of needs causes undesirable, or problem behaviour. If such behaviour is allowed to continue over a period of time, it is likely to lead to deep-seated problems.

NEEDS AND PROBLEMS OF CHILDREN

Activity No. 5

In your experience, you must have come across such problem behaviour in your students. Make a list of such behaviour.

Collect
Collate
Discuss

As you must have found while listing, problem behaviour can be of different types. It may be listlessness and lethargy due to malnourishment, aggressiveness and bullying to demand attention, withdrawal and submissiveness due to lack of security. However, it should be noted that there is no certainty that non-fulfilment of one particular need will lead to the same type of problem behaviour in all children. For example, Ramesh, whose need for security is thwarted, becomes timid and meek, while Radha who also feels insecure, starts to stutter and stammer when she has to speak in the presence of her classmates. Both need to be given security, but the ways they manifest their needs are different. In other words, individual differences in children need to be kept in view while we try to interpret children's problem behaviour.

Activity No. 6

Write down the steps that you took to help children cope with their problems. Do you think they were effective? If not, why?

Collect
Collate
Discuss

The teacher plays an important role in helping children cope with their problems. In a developing country like ours, the teacher's responsibility is even greater because the support that one can receive from the home front is limited. A very large number of our children are first-generation learners whose parents may not be in a position to give their children much effective help. The teacher therefore has necessarily to play the key role.

Unfortunately no single prescribed "medicine" is available to help children overcome their difficulties. Understanding individual problems and the causes behind them, is imperative without which no help can be extended. Let us take different children. Radha has problems of speech-stuttering and stammering. She feels insecure and every time she has to speak in front of the class, she is miserable, but otherwise she is all right. Obviously her confidence needs to be built up. Ways and means have to be discovered to find situations where Radha can excel and such success experiences should help her considerably to cope with her difficulties. Side by side, the teacher has to work with other children so that they become supportive and not troublesome. Now let us take Raju who is the mischief-maker of the class. Probably it is a good idea to give him a key job which implies a good deal of responsibility, for example, a class monitor.

It is important for the teacher to try to understand each individual child and the reasons for their difficult or deviant behaviour. Once this attempt is made, the teacher

will soon find that it leads to some thwarted need or the other. It is then upto the teacher to devise situations where the child's thwarted need can find fulfilment.

However, very often you may find that the teacher needs the support of the home in helping the child.

Activity No. 7

Can you identify cases among your students where you needed home support to help children cope with their problems. Did you get this support easily? What are the steps you took to get parents' cooperation?

Collect
Collate
Discuss

The importance of the home cannot be overstated in child development. It cannot be denied that the teacher is able to assist the child much better if there is support from the home. For example, take Vijay, a malnourished and listless child. Vijay obviously needs better nourishment. It is then necessary for the teacher to call in his mother and give her some tips on how to make more nourishing food. Of course it may be true that she is too poor to afford to give the child milk or such expensive items. But it may be possible to help her to make more nutritious food, for example, by adding seasonal and green leafy vegetables to the staple diet of rice or chappatis. Vijay and his mother may be encouraged to do some kitchen gardening, if they have the space at home. Now, take the example of Sita, who is an under-achiever. Sita does not perform in accordance with her ability. She is a bright girl, but does not do well in class. You may find that parental aspiration is too low, her parents may say that Sita is a girl and there is no need for her to do well at studies. It is then necessary for the teacher to have a heart-to-heart talk with Sita's parents and try to enlist their support and encouragement, which will go a long way in helping Sita achieve her potential.

Summary

Let us recapitulate. In addition to the basic needs of food and shelter, children have also social and emotional needs. Needs for approval, attention, recognition, independence etc, are examples of social needs, while the need for love, security, self-respect etc. are emotional needs. It is these needs which make children behave in a particular way. If the teacher lacks a sound knowledge about these needs and how they motivate human behaviour, he/she is liable to make wrong inferences about why a child behaves as he/she does. If these needs are not adequately met, it may lead to certain types of problem behaviour in children. These problems may be manifested in many ways: aggressiveness, timidity, withdrawal, speech problems and low achievement. However, it is important to bear in mind that children differ in their expression of problems. All children at some point show problem behaviour, but if handled well, they can get over

these difficulties. Both parents and teachers need to understand the causes of such behaviour, so that they can take steps to help children cope with these problems. Providing success experiences to children, providing them with warmth and love, giving them due recognition, encouraging them to take independent action, giving them opportunities to express themselves either orally or through creative art experiences are some ways by which children can be helped to cope with their personal problems.

Continuous Comprehensive Evaluation at Primary Level

Overview

This module is meant to explain the purpose and methods of evaluating pupils' progress at the elementary stage. It interprets evaluation as a comprehensive and continuous process. Evaluation should not be used only to certify achievement but also to promote it, by continuously checking on whether the expected levels of learning have been attained. The root of the idea of continuous comprehensive evaluation lies in the fact that growth in human beings takes place simultaneously in the diverse dimensions of the personality of pupils (as contrasted with the segmental growth in exclusion of other aspects). Furthermore growth does not take place by fits and starts, but continuously.

The evaluation process includes collecting evidence of learning or behaviour modification, analysing and using test results to take decisions regarding the progress made by pupils. The purpose of evaluation should not be limited to declaring that pupils have "passed" or "failed" but to identify the strengths and weaknesses, making good the deficiencies, and enriching their potential.

The module develops the concept of evaluation as per the National Policy on Education—1986. The concepts explained are illustrated.

Objectives

After studying this module you will:

- appreciate that comprehensive evaluation of all aspects of pupils' growth i.e. of head, heart and hand is crucial for the all-round development of the child.
- understand that continuous evaluation requires frequent and purposeful assessment of learning inside and outside the classroom.
- be able to select appropriate techniques of evaluation and use them to improve learning and teaching.
- be able to plan a reasonable scheme of continuous comprehensive evaluation.
- be able to use the results of continuous comprehensive evaluation to improve the level of attainment and proficiency of pupils through diagnostic and remedial/enrichment instruction.

Concept

According to the National Policy on Education—1986, assessment of performance is an integral part of any process of learning and teaching. As part “of sound educational strategy, examinations should be employed to bring about qualitative improvements in education.” The examination system should “ensure a method of assessment that is a valid and reliable measure of student development and a powerful instrument for improving teaching and learning.” Translating the policy in terms of activities in the classroom, evaluation at the elementary school stage is seen as being:

- concerned with all aspects of pupil growth.
- an integral part of the teaching-learning process
- a means to improve learning through the cooperative effort of teachers, students and parents
- Useful for improving learning through diagnosis, feedback and correction of pupils’ learning difficulties.

In the final analysis the main focus of the total programme is to abolish external examinations and to replace them by a system of evaluation by the teacher who teaches. This will imply reposing confidence in the integrity of the teacher and faith in the potential of students to achieve a reasonably high level of growth through personal diligence and appropriate guidance from the teacher. The involvement of the parents will, of course, constitute the main element.

Activity Sheet No. 1

Suggest two ways in which evaluation as practised in the elementary school is useful to teacher, parents and child.

Collect
Collate
Discuss

Through observation, giving tests, correcting homework, observing children in the playground and classroom, we continuously assess whether learning is taking place and whether we should, in any way, alter the methods we are using to facilitate it. The purpose of evaluation is to obtain systematic information to understand whether the intended learning has been achieved. Learning here is not restricted only to academic areas, but also extends to personal and social qualities, interests, attitudes and physical skills. In some areas, such as work experience, the latter are more prominent.

Try to answer the following for yourself:

Activity Sheet No. 2

What are the attitudinal changes that need to be emphasised through work experience?

Collect
Collate
Discuss

At the elementary stage the basic skills of language and numeracy, acquisition of information in various subjects, development of the abilities to observe, classify, measure, use space-time relationships, experiment, analyse and ability to communicate are well accepted objectives. Inculcation of attitudes such as tolerance and scientific outlook, and interest in doing manual work for improvement of the physical and socio-cultural environment are goals of education which deserve to be emphasised at this stage. Evaluation should be planned to assess pupil achievement in terms of behaviour modification in all these aspects.

Planning and Utilisation of Evaluation Feedback

Evaluation should be related to the ultimate objective of all-round pupil development. Evaluation, then, may be in seeing whether a child eats vegetables with relish or not; whether he can name the vegetables good for his health. Of course, while evaluating a child's performance, it is important to consider the conditions in which learning takes place, the strong and weak points of the child's home and classroom conditions. Only if the facilities provided for learning and teaching have been reasonably good, can evaluation be meaningful, as also useful for improvement of learning. At times, evaluation, specially at the elementary stage, may be undertaken to find out *how* a child is learning rather than *what* he or she has learnt.

Failure to perform a task should not always be interpreted as the failure of the child. It may be due to the teacher's inability to prepare the child for the task or to make the task clear. It may be due to poor or inadequate teaching. For example, if, in an environmental studies lesson, several children in the class say that the seed forms at the same time as the fruit, this may be because:

- the teaching strategy expected children to discover more than they could on their own
- or the examples given were not sufficient or clear.

The teacher can turn back to instruction (teaching) to determine shortcomings and make up for them. This is a case where evaluation must not be used to judge the pupils and pass a snap judgement on their capabilities. It indicates the need for remedial steps in teaching.

Activity Sheet No. 3

Identify some curricular areas where you, as teacher had not been able to provide either (i) sufficient or (ii) lucid experience for learning. Think of the steps you can take to improve it.

Collect
Collate
Discuss

Sometimes, the activity or the content may be beyond the ability level of the group. Objectives set up may be such as cannot be achieved with the given age-group.

Feedback from evaluation should be interpreted carefully for further action, which may comprise modification of material/methodology or remedial work for the children.

At times, the feedback may be appropriate for curriculum designers, and those who produce learning materials such as textbooks.

In most schools, examinations are organised two or three times a year. For proper and timely feedback, both for teaching and learning, small tests can be used frequently. Evaluation should be used to understand what children have not been able to learn or internalise; results should be used to change teaching strategies and provide more opportunities for learning where achievement has not been of the level expected. Identifying students' weakness, matching the individual pace of learning with things to be learnt are possible only if the assessment is undertaken frequently, using a variety of conventional and non-conventional techniques.

Diagnosing learning difficulties is an important activity at all levels of school but it has a special significance at primary level. In the primary school, pupils acquire the basics of language, numeracy and several other competencies. Weaknesses, undiscovered and not remedied at the right time lead to further deterioration in learning, frustration and also dropouts from school. To improve the level of achievement and proficiency rather than just to assess it, special tests or situations can be devised to verify weaknesses in learning. Remedial work must be designed by teachers to improve pupil-learning.

Planning is essential for evaluating pupils' performance. The following aspects need to be considered before designing evaluation:

1. Are the objectives and minimum levels of learning known?
2. What was the purpose and approach of instruction (teaching) undertaken?
3. Can information collected through tests be easily interpreted for decisions regarding pupils' progress, placement, achievement and improvements needed?

Different types of tests need to be designed for different objectives, such as, for (i) identifying weakness in teaching or learning or (ii) promotion to the next grade.

How can evaluation be made more useful in the primary classes where children are so varied in their pace of learning and their abilities? Often one test is given to all the children in a class. Where learning is at a different pace for each child, a variety of techniques can be used such as oral and written tests, project and practical work. Such techniques provide opportunities to adjust evaluation to the level or pace of learning of the individual child.

If a minimum expected level of learning is predecided upon such as that every child should be able to spell at least 10 out of 24 new words correctly in, say, Class VI or VII, then a test either oral, written or recognising words in a paragraph or poster may be given. Those not able to spell 10 words correctly may be given extra drill. The evaluation in this case is also for improvement.

Evaluating pupils' behaviour, attitudes and interests and providing suitable opportunities for their positive growth will help promote the all-round growth of the children. By using the opinions of other children, parents and other teachers a more complete and reliable picture of the child emerges. Relevant activities can then be

planned by the teacher, on the basis of evidence about the child's performance collected both formally and informally. These would have the potential for generating an optimum growth of the varied faculties of children.

Techniques of Evaluation and Use of Results

It is evident that for evaluation, some information needs to be collected. This is done in a variety of ways. The information has to be accurate and relevant to the type of activity being assessed. The results have to be so recorded as to be useful for making judgements.

Evidence of pupils' growth may be collected through a variety of techniques such as observation, testing, checking homework, review of the materials produced by the child, oral tests, and practical exercises. An anecdotal record is very useful in collecting evidence of growth, particularly in non-scholastic areas.

Simple tools such as check lists may be used to record useful bits of information. An illustration is given below:

<i>Name of Pupil</i>	Yes/No
Helps other children in various activities.	
Respects others' rights (vis-a-vis belongings)	
Plays honestly	
Cooperates in group activities	

Such a record provides guidelines regarding the child's social growth. The technique can be used for assessing attitudes and interests as well.

The assessments can be recorded and maintained in pupils' progress cards with teachers' judgements at every stage.

The information can be used to help the child to grow to his optimal potential, and in all aspects.

Children in elementary schools come from varied socio-economic and educational backgrounds. The learning, as also the evaluation of that learning, has to be adjusted to their previous experiences. The process of learning is as important, perhaps more important, than learning. Evaluation is expected to provide the necessary support by making it possible for children to experience frequent successes. Frequent oral feedback can be provided by the teachers.

When children are given to understand that they are doing poorly in comparison with others, a feeling of inferiority develops. To encourage every child to do his/her

best, it is useful to assess a pupil's performance compared with his or her earlier performance making him/her as his/her own rival.

Activity Sheet No. 4

Given that the learner at the elementary stage has to develop competencies, assimilate new ideas and acquire basic information, suggest the variety of evaluation tools that may be used.

Collect
Collate
Discuss

Population Education at Primary Level

Overview

The National Policy on Education—1986 specifies “Promotion of observance of small family norm” as one of the major goals of our educational system. The programme of action mentions observance of the small family norm as one of ten core curricular areas. Students at every stage must be adequately exposed to these areas. These provisions are aimed at reinforcing our efforts to arrest the pace of rapidly-growing population. The problem of the rapid increase of population is basically related to the developmental needs of our country. Since population is not one problem but many, its solution could be sought through a multi-pronged strategy.

Population education has been adopted as an intervention strategy. It aims at making students aware of the relationship between the population situation and various aspects of national development. By doing so, they are expected to develop a rational attitude towards population issues. Since they will understand these issues in the context of their immediate family setting, they will appreciate the desirability of observance of the small family norm. However, the acceptance of this norm will depend a great deal on the inculcation of commitment among students.

The present module makes an attempt to outline a minimum core of ideas in population education suitable for the primary stage. It tries to clarify the effective modality for teaching population education. The module presents certain learning activities to explain both these aspects. It also suggests suitable follow-up for the school situation.

Objectives

After reading this module and undertaking suggested activities you will be able:

- to identify minimum essential ideas of population education that should be transmitted to students at the primary stage;
- to appreciate a strategy of teaching population education, and
- to imbibe the concept of population education and develop competencies to communicate its ideas and messages through existing related contents in textbooks of different subjects and by involving students in various activities.

Learning Activities

Some learning activities are presented with a view to explaining the concept of popu-

lation education and clarifying the modality of its teaching. These activities are of two types. Some can be undertaken exclusively by teachers. Others are meant to be used by teachers in classrooms where students can be involved.

Today the problem of population growth is a matter of great concern. You must have read about its impact on the life of human beings. Newspapers, periodicals, magazines and other media discuss this issue. Programmes on television and radio highlight its different dimensions. You must have observed the red triangle and slogans on walls and posters. Some government or voluntary agencies also strive to bring home to people the need to adopt a planned way of healthy and happy family life.

In view of above, two pertinent questions merit your consideration. They are:

- (i) Are the people aware of the problem of growing population and its adverse impact on their lives and on national development?
- (ii) Even if the majority of them are aware, do they really take steps to plan the size of their own family?

By discussing these questions you may arrive at a consensus. You may find that the number of people who plan their family size is gradually increasing. But you may conclude that there are many more who are doing nothing. Why is this so? Identify the reasons. Some of the reasons are mentioned in the following table. With the help of the entire group, prepare an exhaustive list of such reasons.

Table No. 1

Reasons for Non-Acceptance of the Small Family Norm.

1. Those who are poor and illiterate, do not understand the problem of population growth.
 2. People do not appreciate how the increase in the size of their respective families adversely affects national development.
 3. Poor people and villagers regard children as assets, because more hands always add to the income of the family.
 4. Most women are illiterate and uneducated.
 5. A couple goes on giving birth to children, as all their children do not survive.
 - 6.
 - 7.
 - 8.
-

Activity No. 1

Since it is difficult to convince elderly people, it is thought proper to catch future citizens in their early years. Population education has been introduced with this end in

view. But population education is not taught as a separate subject. The ideas and contents of population education are integrated into existing subjects. That is why, the role of the teacher becomes crucial for the effective communication of these ideas to students. He should be well aware of the ideas and contents that may effectively convey the message of population education.

For students of the primary stage these ideas and contents may be related to their immediate environment. Only towards the later stage should the state and the nation be taken care of. For effective integration of these contents the selection of suitable subjects is important. At this stage, language, environmental studies, social studies (including history, geography and civics) and sciences are regarded as suitable subjects.

Some core ideas and contents of population education are mentioned below. Classify these ideas and contents on the basis of their suitability for being integrated into different subjects. For this purpose a table is provided with two examples. Classify the rest of the ideas and contents and write in that table. It is important to mention that there may be ideas or contents that could be suitably integrated into more than one subject. Mention such subjects against the concerned ideas. The ideas and contents related to various aspects of life are as follows:

Social and Economic Development

- (i) Small family can fulfil the basic needs better;
- (ii) Quality and not the quantity in children is important;
- (iii) Equal participation of women and men;
- (iv) Education and employment for women;
- (v) Disadvantages of early marriage;
- (vi) A smaller family implies a larger individual share in resources;
- (vii) A larger family means fragmentation of land;
- (viii) Rapid growth in population and its impact on socio-economic life.

Environment (Natural and Social)

- (i) Proper balance between population and resources and judicious use of resources;
- (ii) Population growth and its pressure on land, energy, fuel and other resources, soil, water, air and sound pollution, deforestation, soil erosion and threat to wild life;
- (iii) More population, more production, yet a smaller share, dissatisfaction, social crimes.

Family Life

- (i) Small size of family, more chance of a better quality of life;
- (ii) Many children result in adverse impact on health of mother and child;
- (iii) A daughter is as important as son. Her right to be educated means an

- educated mother and a better quality of family life;
 (iv) Responsible parents and their role in family life.

Health and Nutrition

- (i) A small family carries more likelihood of better health among its members;
 (ii) Healthy mother, healthy child, need to have fewer children, immunization of children;
 (iii) Cleanliness, safe drinking water, balanced diet, health facilities;
 (iv) Population growth and pressure on health facilities.

Demographic Implications

- (i) Size, structure and composition of population at family, state and national level;
 (ii) Need to reduce death rate, infant mortality rate and birth rate;
 (iii) Impact of migration from rural to urban areas;

Table-2

Classification of Ideas and Contents		
S.No.	Ideas/ Contents	Subject
1.	Small family can better fulfil basic needs	Social Studies/ Languages
2.	Water, air and sound pollution	Environment Studies/ Science
3.	Reproduction in plants and animals	Science
4.		
5.		
6.		
7.		

Activity No. 2

The above-mentioned elements of population education could be effectively taught to students through the subjects suggested by you. However, teaching of population

education will require special treatment. Teachers will have to adopt effective teaching methods. Some examples are as follows:

Idea: Responsible parents and their role

Place before students the experiences regarding the behaviour of the she-snake, she-cat and birds.

1. A she-snake, hatching a large number of eggs, but being unable to feed and protect the young ones is Nature's own way of maintaining a balance.

Make line drawing on BB

2. A she-cat hiding her young ones from he-cats by picking them up gently by the neck in her mouth. He-cats trying instinctively to limit their numbers.
3. Bird couple jointly building their own nest in anticipation of new arrivals, hatching eggs and feeding young ones in turn by both parents. When they grow and start flying, parents bid them goodbye. Selfless attitude of parents.

What You May Do

You may discuss in your group how best this topic can be dealt within a classroom situation. Proceed along the following lines.

1. Encourage students to narrate their own experiences of cats, dogs, birds, cattle, etc. in their own surroundings.
2. Students may be drawn to a situation where they make observations about the behaviour of different kinds of animals, while they act as parents, e.g. of birds, cattle, etc.
3. They may also compare the behaviour of birds and human beings. They may be encouraged to think for themselves on what roles parents should play in making family life happy.
4. They may be asked to observe roles of parents in different families. How far do they care for the education, health and well being of their children.

Activity No. 3

Discuss another method of teaching population education.

Idea: Demographic Implications

Attempt to convey to students the crucial importance of family size and its demographic implications.

Develop this idea by placing before them situations in three islands with three types of family-size patterns:

1. In one island there are two families with two children—a boy and a girl.

Draw on BB
or make a chart

2. Another island has two families but every family has three children—two girls and a boy in one, and two boys and a girl in the other.
3. In the third island there are two families with four children each—two boys and two girls

What You May Do

In your own group you can undertake the activity of observing what would be the situation of each island after three generations. This activity could also prove very effective in a classroom situation. Note the following points:

1. The families on each island pass from one generation to the other on the basis of a consistent rule. Each of the families in the first island has only two children, in the second, three children and in the third, four children.
2. You, in your group with the help of other members or in your classroom with the help of students may calculate what would be the size of two families in every island after three generations.
3. What was the share of the first generation of each family in the resources of their respective island and what would be the share when the third generations arrived?
4. While calculating the size of families on each island, the following figures should be worked out.
(a) the number of children in each family (b) the number of couples in each family (c) total population on the three islands (on the presumption that all three generations survived without any death).
5. Children may work it out by preparing dolls or drawing pictures. Some may work out the problem mathematically.

Follow up Activities for School Situation

1. Identify related contents in the textbooks of different subjects and try to integrate the ideas and contents of population education.
2. Plan for learner-centred teaching-learning situations. They may undertake different kinds of activities and involve students.
3. They may ask students to conduct surveys in their neighbourhood to develop among them a better understanding of:
 - (a) Family size and availability of goods and services regarding basic needs.
 - (b) Educational and health facilities, available to members of each family.
 - (c) Size of families in the neighbourhood and its impact on environment.
 - (d) Educational and health status of family members and their attitude towards a quality of life.
 - (e) Values and beliefs that influence the size of a family
 - (f) Families with illiterate women and its impact on family life.

Students may be advised to collect data on the basis of a simple schedule prepared by the teacher and discuss the findings in the classroom.

Art Education at Primary Level

Overview

Art is a process of fulfilment running through every aspect of life. It is vital to learning. It provides a new way of looking at life. It is a way of meeting the challenge of the present, projecting into the future in a creative, productive and joyful manner.

Today, there is an over-emphasis on rote learning and examinations. Students do not experience joy in learning and acquiring knowledge. Whatever is taught at different levels of the school is mostly based on certain formulae, set rules and methods. It denies the true inner involvement of students. In this situation, various arts can play an important role as a liberating force.

In the arts, the fundamental principle lies in understanding that all human beings are unique and have creative potential. They learn and act in accordance with their own rhythm, ability and experience. It is, therefore, neither possible nor desirable to make all of them similar. Each is, as in nature, a tree that has no copy. The idea of introducing the arts into school education involves all the elements of commonly known art forms—visual, performing and language arts, namely, drawing and painting, modelling and sculpture or construction work, pottery and ceramic work, music, dance, drama or playmaking, poetry and creative writing, and many more creative arts and craft forms.

Objectives

After studying this module you should be able to:

- develop a broader understanding of the subject and its implications for promoting creativity,
- modify your present approach to teaching,
- organise a variety of activities in the classroom.

Various art forms help the child to explore various means of communication (verbal and non-verbal) and to encourage him to express himself in his own way, sharpen his senses through keen observation of the environment, discover his own preferences through exposure to a variety of materials, discover and identify the personal form and style of expression, become aware of various art forms in his own environment or locality, develop his skills in his use of various tools, instruments and other art materials in the process of discovery and exploration, as also in the process of

discovering space organisation, colours, forms, lines, texture movement; develop a sense of organisation, and a sense of design which inculcate in him a sense of order with regard to his personal appearance, home, school and community.

The Child-Centred Approach

Art education provides joy of learning and the pleasure that sustains curiosity. It enables students and teachers to work together creatively. The objective world (material or immaterial) is known to human beings through light, sound, touch and smell experiences, associations and knowledge. Effective learning and development takes place through direct experiences. Learning occurs best when all the senses, emotions, and physical and cognitive abilities are involved. Education in arts therefore requires observation, awareness of change, understanding of ideas, skills for developing ideas and sensibilities. Learning by only hearing or reading is partial education, resulting in superficial understanding. The arts bridge the gap between the outer and the inner world by providing experiences for internalising knowledge. Students need to express what they know. In expression, ordering of past experiences, associations, ideas and concepts takes place.

Both in perception and in expression, individuals are unique. Many people looking at the same flower may see it different. Some may enjoy its colour, some may enjoy its fragrance, some may appreciate its form and shape or its pattern and others may wonder about its growth. No one way, is the best or the right way. Each one has his own way of perceiving and thinking, and each perhaps has his own criteria for improving the quality of his life. The arts in education provide rare opportunities for students to be different from one another and still make their contribution without being right or wrong. The teacher's role is to give responsive encouragement to students to learn without fear and competition. A language is not learnt only by studying about it. Using the language, speaking, expressing oneself, studying its literature—this gives true mastery over it. This is so with all languages and forms of artistic expression.

Any form of genuine personal expression without any external influence must be honoured. Copying and other forms of direct and indirect influences must be discouraged.

Music, painting, creating three-dimensional forms, movement and acting are all languages of part developed by human beings to understand the world around them. Words form part of the language of literature, and numbers, the language of arithmetic. Arts are other languages created to understand and express other dimensions and aspects of the world we encounter. Human beings can think and create in sounds, colours, words and numbers. Lack of opportunities for the development of any one of these languages restricts growth of the total human potential.

Process Approach and Arts Activities

Art work at school is not comparable to what we generally see in museums or in classical performances; in cinema halls or theatres, in book illustrations and in board-

ings or advertising posters; in architectural monuments or other buildings and temples; in musical and dance concerts or drama theatres; in mushairas and kavisammelans. It is nearer to local folk art and craft, and folk theatre. It is also different from what most of us may have experienced during our schooling when we were required to copy either from drawings made by the teacher or by master artists of Ajanta and Ellora, or Mughal and Rajput Miniatures, works of Nand Lal Bose and other master artists; or we were supposed to prepare a work of art based on age-old concepts like making a few floral and geometrical designing patterns or plates of still life/model drawings, and landscape paintings from memory without any emotive content and relationship with personal experience and thoughts. Creative arts cannot be subsumed in work experience under which a few craft-oriented activities are conducted, but in which the approach and the product are made with different objectives.

The creative arts programme in a school finds its way to a child's natural way of doing, playing and making various art forms, in his own way, in response to his day-to-day life experiences with a variety of media and materials to give expression to his feelings, thoughts, emotions, and fantasies. It is spontaneous in nature, created out of the emotive responses of the individual.

In such an experience, there may or may not be any tangible material end-product. The process and experience which shape the child are the most important aspect of art education.

Sources of Art Education

The arts programme in school must reflect the fragrance of the region. Artistic expression in music, poetry, dance, theatre and in the creation of forms have been a part of human life from the beginning; it is not something new and strange, but an integral part of human existence.

A child's mother tongue is the nearest and dearest medium of expression that he knows. Songs, lullabies, rituals, paintings on walls, gesture languages of his own region, are therefore equally important and need to find their place in the school programme. But there cannot be any rigidly structured and graded programme of the arts. The materials mostly used or found in a local environment/market or through community resources should be used. The only criterion should be that the child should not feel frustrated and can handle it. He/she must be allowed to work in his/her own way.

Evaluation in Art Education

Any pre-conditioning or extrinsic motivation promoted through comparison, competition or examinations would defeat the basic purpose of the arts in education. Evaluation should be undertaken to assess development of initiative and interest in different modes of expression through a variety of media, materials and techniques, improvisation, general awareness, space organisation, and general development of the child in

terms of his/her own level. This, of course, has to be viewed against the types of classroom interaction procedures adopted to exercise choice and freedom.

In evaluation of the certain areas of creative activity, group rather than individual activities should be used. Whether creative activities are conducted individually or in groups, there is a place for inter-individual interaction by representation and display of 'products'. Participation in such events should be considered a positive gain as an evaluation technique.

Activity Sheet No. 1

Evolve a format for a cumulative record
of evaluation in art education.

Overall assessment on the achievement in the arts should find a place in the record handed to the child at the end of each academic year.

Art Education Activities in Pre-Primary and Primary Classes (I to V)

Ideas to be Remembered

- Young students have a natural flair for rhythm, elegance, sense of curiosity and joy. The programme must build and develop these potentials of students and motivate them to enjoy learning.
- At this stage of education, students learn to observe and explore the world. Art education should flow from major learning experiences.
- At this stage, students are not interested in the intricacies of techniques and skillful performances. Teaching techniques and special skills are, therefore, at this stage inadvisable.
- Children should choose material and media of their personal liking, in keeping with the mood and mode of expression. Variety of materials and media that are simple, attractive, locally available, and not complicated, should be provided. Natural materials such as clay, sand, flowers, leaves, colour papers, colour magazines, empty boxes, tailor cuttings, rags, fibres and earth colours have aesthetic qualities best suited to young children. Simple local musical instruments like duffy, mangira, dholak, gongs and ghungroo and other improvised methods help suitable rhythm and musical environment.
- Children's experiences at home and school are significant to them. They should be encouraged to respond to these experiences through their choice of medium.
- Children should not be asked to copy or use formula books but should be left free to enjoy the process of doing and creating by themselves. The teacher

should only try to stimulate their imaginative thinking by way of discussion on their day-to-day experience, recalling experiences, creating imaginary or make-believe situations, visits, etc.

- The climate of the classroom should be made friendly and pleasant.

Suggested Integrated Arts Programmes

Art education activities in lower primary schools may be of diverse kinds, sometimes even a combination of many activities.

a. Theme-Oriented Activities

Students can be asked to describe their daily life experiences or what they are required to learn in school through action, sounds and pictures. Variety of expression should be encouraged to provide room for different preferences.

b. Integrated Approach

The thematic approach should also be integrated with other school disciplines. Such an approach is especially suited for single-teacher situations. Art activities like movements, mime, sound, music and creation of forms can help students to acquire knowledge in other disciplines.

Creative drawing exercises, alphabet songs, counting, sorting and classifying games can be used to help students acquire skills necessary for further learning.

C. Media-Oriented Activities

Art education provides a unique experience in itself. Simple, locally-available materials may be used.

Using clay, stones, leaves, grass, cardboard for creating three-dimensional objects, drawing and painting on paper, ground, sand and wall with colour, chalk, charcoal, or making a collage of paper and waste materials can be taken up with cardboard, cardboard boxes, and other junk materials.

d. Rhythmic Movements, Mime and Sound (Music) Activities

Rhythmic movements and mime can be a source of joy, expression, as well as learning.

The movements can be accompanied with simple rhythmic beats with improvised instruments and/or vocal sounds. Movements and music need not necessarily be treated as separate activities at this stage.

All movements and sounds are considered rhythmic experiences. However, some sound exercises may be provided to—(i) distinguish sounds both by listening and creating, (ii) time and beat relationship for a rhythmic pattern, (iii) Controlling the volume of the voice, (iv) creating a variety of rhythmic sounds including humming, (v) describing the world of sounds. singing together is enjoyed by most young children.

Some examples of topics/themes are listed here, but you can prepare your own list.

Playing trains, houses, animals, trees, members of the family, doctor, policeman,

bus driver, tongawala or vendor, enacting scenes like cooking, birthday functions, marriage, farming, cutting, sewing, ploughing, railway station, and festivals, or creating rain, storm or different-recalled experiences and imagining others.

Motivational Techniques

Classroom activities should precede motivational experiences like discussions, visits to out of school places, participation in festivals and activities like collection of items of interest and discarded objects from environment.

Puppet shows and folk art performances should be shown to the children as frequently as possible. Simple rhythmic activities, free manipulation and play-way activities are useful.

Work Experience at Primary Level

This module is designed to help you to understand the programme of Work Experience as an essential component of school education. It provides you with the concept of Work Experience, its scope, your role in the implementation of Work Experience, community involvement etc.

After reading this module and performing the activities suggested in it you will appreciate how Work Experience aims at giving the future citizens a keen sense of personal worth, dignity and efficiency, and at strengthening in them the desire for self-improvement and social service. The criteria for selection of Work Experience activities will help you to select the most useful activities, with locally available resources. The list of suggested activities will give you an idea of the vast scope of this curricular area.

You will observe in the following pages that the module follows a doing-discussion approach rather than a chalk-and-talk approach. During the orientation programme you will be given opportunities to demonstrate your individual expertise in work activities and also engage in 'doing' some selected work activities.

Objectives

After studying this module you should be able to:

- understand and discuss the concept, objectives and salient features of the Work Experience programme,
- lay down criteria for selection of appropriate Work Experience activities,
- devise ways for disposal of Work Experience products effectively,
- locate and seek community involvement in the Work Experience programme,
- plan and execute Work Experience programme on the right lines,
- involve the students actively-individually and groupwise.

Concept

The National Policy on Education (NPE)—1986 reiterated the concept of Socially Useful Productive Work and renamed it Work Experience. The NPE laid down the following as policy statement:

“Work Experience, viewed as purposive and meaningful manual work, organised as an integral part of the learning process and resulting in either goods or services useful to the community, is considered an essential component at all stages of education, to be provided through well-structured and graded programmes.

"It would comprise activities in accordance with the interests, abilities and needs of students, the level of skills and knowledge to be upgraded with the stages of education. This experience would be helpful on his entry into the workforce."

The above statement provides a definition which underscores:-

- the significance of work in the learning process,
- the need for a product or service emerging out of the work performed,
- the universality of work in the school system and beyond,
- the need for well-structured and graded programmes,
- a clue to the nature of work activities so as to conform to the interests, abilities and needs of the learner,
- a case for increasing the skill level to match the stage of education.

Work-Experience Activities at the Primary Stage (Grades I-V)

At the primary stage, a variety of activities will be made available to the children. Given an open list of activities with a great deal of variety suited to the intellectual and physical development of children, the head of the school should select 40-50 activities to be conducted within the time allocation provided at this stage, which is of the order of 20% of the total instructional time.

At this stage, the objectives of Work Experience come very close to those of education in general. Emphasis should be laid on the development of good health, environmental sanitation and aesthetic practices. Awareness should be developed in the child about the world of work. A well-organised programme should develop in the child desirable attitudes, values and habits of work.

Activity Sheet No. 1

Can you suggest some work situations within the school, where Work Experience activities can be organised? Prepare a list of such work situations.

Collect
Collate
Discuss

Young children enjoy participation in activities at school, at home and in the community

Activity Sheet No. 2

Can you list some work situations outside the school, where Work Experience activities may be organised within a given period of time?

Collect
Collate
Discuss

Selection of Activities

The success of a Work Experience programme to a great extent depends on the proper selection of activities. These activities at the primary stage should be simple and enjoyable to the children. They should be in the form of environmental studies.

involving observation of work situations, elementary processes of work, and preparation of handiwork from indigenous and low-cost materials through interesting self-expressional activities.

Activities should be so selected that they help the children derive joy in giving shape to their imaginations.

Activities should offer scope for

- experimentation with materials and tools,
- helping elders in diverse work situations,
- sharing work in group situations,
- fulfilling individual responsibilities.

In selecting activities for pupils, special care should be taken to select those that are suitable for their level of maturity, satisfy their curiosity, and have potential for developing desirable work and social values.

Each activity may comprise three dimensions:

- observation of work situations and identification of problems,
- participation in work situations and converting waste materials into useful or beautiful objects,
- preparing useful/ beautiful articles in large number.

Now you have an idea about the type of activities and their selection criteria. Keeping these in view, you may do the following:

Activity Sheet No. 3

Can you think of some feasible Work Experience activities in your school situation? Prepare a list of such activities.

Collect
Collate
Discuss

All of you are experienced teachers. You can easily locate some colleagues (volunteers) from within your group who have developed competence in one activity or the other and would like to demonstrate it to the whole group.

Activity Sheet No. 4

Make a list of such expert teachers along with the activity they would like to demonstrate

Collect
Collate
Discuss

A session may now be devoted to individual demonstration and discussion with your fellow-participants.

Activity Sheet No. 5

Identify 4 to 5 selective items of work which you would like to do and learn for yourself?

Collect
Collate
Discuss

Divide yourselves into small groups of say 5 each. Choose one or two items from the above and start preparing them individually, as well collectively, under the guidance of concerned expert teacher-participants.

Teachers of Work Experience:

In your school you have teachers to teach languages, science, mathematics and other subjects, but no special teachers for Work Experience. Then, who will teach Work Experience and organise activities? Work experience is the only curricular area where every teacher of the school can participate. Undoubtedly, the services of teachers trained in specific trades will be useful for conducting production-oriented activities, but every subject teacher can think of, and plan activities in his subject. Such subject-based activities will help students in learning by doing. The services of craft teachers should be utilised for a Work Experience programme.

Activity Sheet No. 6

Can you suggest some Work Experience activities that can be organised by different subject-teachers? Make a subject-wise list of such activities.

Collect
Collate
Discuss

In single teacher schools, you should not divide students into 5 classes for the purpose of conducting the activities. You should constitute 2 to 3 groups of children, who would work in the corresponding number of activities. Obtain the help of older children to guide the younger ones in conducting the activities.

Resources

Some threshold facilities will be provided to your school for launching the Work Experience programme but you have to explore community resources to conduct a variety of Work Experience activities.

Activity Sheet No. 7

Think about the resources available in the community that can be tapped for launching Work Experience programmes in your school. Prepare a list of resources (men and materials).

Collect
Collate
Discuss

Disposal of Work Experience Products

Many Work Experience activities will result in the production of tangible goods. They will require suitable means of disposal. For purpose, it is essential that the activity produces the quantity in advance as per demand for the item/product. The sales can be made through cooperative stores in schools, exhibition-cum-sale at the time of school

functions, by arrangement with local shopkeepers, as well as with other schools and organisations.

Quick disposal of Work Experience products is of the utmost importance, particularly of perishable and semi-perishable goods like fruits, vegetables, milk and milk products, eggs, etc. Periodicity of demand for certain products like greeting cards, *rakhis*, woollen garments, ice cream etc. should also be taken into consideration before taking up the activities.

Evaluation

Evaluation should be a continuous process. It should be internally conducted by the teacher concerned and should be shown on the performance record of the student. Theory and practice should be evaluated in an integrated manner. More weight should be given to the evaluation of actual practical work.

Evaluation in Work Experience should find the same place of honour and significance as for other subjects. In evaluating the student's performance, paramount importance will be given to attitudinal development at the primary stage.

Activity Sheet No. 8

Think about the format of an evaluation proforma in Work Experience. Prepare a comprehensive but practicable proforma for adoption in your school.

Collect
Collate
Discuss

Suggested Activities

At this stage, the content of Work Experience will have three components, environmental studies and application; experimentation with materials, tools and techniques and work practice. The young children enjoy exploration of their environment. They like to participate in a large number of activities both in school and at home. Therefore, Work Experience at the Primary level should help in:

- developing awareness about the world of work,
- promoting better health and sanitation habits,
- acquainting children with the local environment and various work situations,
- providing opportunities for creative self-expression,
- developing work ethics viz. punctuality, discipline, cooperation, honesty etc.

a. Environmental Studies:

Observation of local environment—trees, plants, flowers, birds, animals, insects. Visiting work places and observing work situations, participation in sanitation, cleaning and beautification of houses, classrooms, personal cleanliness, proper

arrangements of personal belongings, visits to places of work, cultural and recreational activities.

- b. Experimentation with materials, tools and techniques:
Familiarisation with raw materials for making items of daily use, proper handling of domestic tailoring tools and appliances, knowledge about soaps, cleaning powders, disinfectants, handling of common gardening tools, knowledge about food, use of colours, paints, painting brushes etc., handling of materials like clay, paper, cardboard, leaves, flowers etc.
- c. Work Practice:
Drawing, painting, self-expressional activities, paper work, making clay toys, collection of materials used in various production activities, cardsheet and cardboard work, raising plants in pots, cleaning of classrooms, use of needles, scissors. Sanitary habits pertaining to eating, drinking and cleaning.

प्राथमिक कक्षाओं में मातृभाषा (प्रथम भाषा)—शिक्षण

भाषा का सीधा संबंध जीवन से है। मातृभाषा विद्यालय में पढ़ाया जाने वाला एक विषय मात्र नहीं है अपितु छात्रों के जीवन का अविभाज्य अंग है। मातृभाषा उन्हें उनके परिवार व समाज से जोड़ने वाली कड़ी तथा उनकी अभिव्यक्ति व विचारों का माध्यम है। बालकों के व्यक्तित्व के निर्माण में सबसे अधिक सहायता मातृभाषा से ही मिलती है। राष्ट्रीय संस्कृति की प्रमुख वाहिका भी मातृभाषा है। इसके साथ यह विद्यालय के अन्य विषयों की शिक्षा का भी माध्यम है। अतः मातृभाषा को किसी एक घंटे में पढ़ाने के लिए परिसीमित न कर, इसे पूरा दिन पढ़ाने का विषय समझना चाहिए। इनकी विषय वस्तु भी बालकों की आवश्यकताओं और रुचियों को ध्यान में रखते हुए काफी विस्तृत होनी चाहिए। मातृभाषा विचारों के आदान-प्रदान का माध्यम है अतः यह आवश्यक है कि बालकों को भाषा-संबंधी विभिन्न प्रकार के सामूहिक तथा वैयक्तिक अनुभवों द्वारा भाषा पर अधिकार प्राप्त करने में सहायता दी जाए।

कुशलताएँ:

यद्यपि मातृभाषा-शिक्षण कई बातों में अन्य भाषाओं के शिक्षण के समान ही है फिर भी इसकी कुछ अपनी विशेषताएँ भी हैं। सम्पूर्ण भाषा-शिक्षण द्वारा अनेक प्रकार की भाषा-संबंधी कुशलताएँ एवं योग्यताएँ विकसित की जाती हैं, जिन्हें मोटे तौर से निम्नलिखित तीन कोटियों में विभक्त किया जा सकता है।

1. यान्त्रिक कुशलताएँ
2. अर्द्ध-यान्त्रिक कुशलताएँ
3. चिन्तनात्मक तथा सृजनात्मक योग्यताएँ

भाषा सीखते समय, भाषा की यान्त्रिक कुशलताओं का प्राप्त किया जाना शिक्षार्थी के लिए सर्वाधिक महत्वपूर्ण है। इनमें शुद्ध वर्तनी, सुलेख आदि की कुशलताएँ निहित हैं। इन कुशलताओं को ग्रहण करने में मांसपेशियों का नियंत्रित संयोजन आवश्यक है जिसे पर्याप्त प्रशिक्षण तथा समय देने पर, सभी शिक्षार्थियों को सन्तोषजनक रूप से सिखाया जा सकता है।

कुछ अर्द्ध-यान्त्रिक कुशलताएँ ऐसी हैं जो भाषा के प्रयोक्ता में स्वचलित स्वभाव का रूप धारण कर लेती हैं, किन्तु उनमें भी वैचारिक पृष्ठभूमि का होना आवश्यक है। इस प्रकार की विशिष्ट कुशलताओं के उदाहरण में पारस्परिक वार्तालाप, पठन तथा लेखन है, जिन्हें हम बिना किसी प्रयत्न के प्रयोग में लाते हैं। किसी शब्द का शुद्ध उच्चारण व लेखा यान्त्रिक

कुशलता है। किसी शब्द का उपयुक्त प्रसंग में प्रयुक्त करना प्रारम्भ में तो यान्त्रिक रूप से नहीं होता, पर अत्याधिक प्रयोग द्वारा प्रतिदिन के जीवन में प्रयुक्त होने वाले अधिकांश शब्द हमारे ओठों अथवा कलम द्वारा स्वयं ही प्रकट होने लगते हैं।

सभी भाषाओं की यान्त्रिक तथा अर्द्ध-यान्त्रिक कुशलताएँ समान होती हैं, चाहे उन्हें मातृभाषा के रूप में सिखाया जाए अथवा द्वितीय या तृतीय भाषा के रूप में। मातृभाषा—शिक्षण का उद्देश्य यान्त्रिक एवं अर्द्ध-यान्त्रिक कुशलताओं को सिखाने से कहीं अधिक व्यापक है। मातृभाषा का मुख्य उद्देश्य शिक्षार्थी को भाषा के प्रयोग में चिन्तनात्मक तथा सृजनात्मक स्तर पर पहुँचाना है। भाषा-शिक्षण में भाषा का वैचारिक पक्ष बहुत ही महत्वपूर्ण है। यदि हम अपने बच्चों में, मातृभाषा में ठीक ढंग से सोचने तथा महसूस करने की योग्यता का विकास न कर सकें तो हम भाषा-शिक्षण के कार्य को करने में पूर्णतया असफल रहेंगे।

भाषा-शिक्षण करते समय आवश्यक है कि भाषा की कुशलताओं तथा योग्यताओं के तीनों पक्षों को समान महत्व दिया जाए। चाहिए तो यह कि प्राथमिक कक्षाओं अर्थात् पहली कक्षा से लेकर पाँचवीं कक्षा के समय में बालक सभी यान्त्रिक कुशलताओं को सीख लें और आठवीं कक्षा के अन्त तक सभी यान्त्रिक एवं अर्द्ध-यान्त्रिक कुशलताओं में परिपक्वता प्राप्त कर लें। इतना हो जाने पर माध्यमिक तथा उच्चतर माध्यमिक स्तर की कक्षाओं में शिक्षक स्वतंत्र रूप से अपना समय तथा शक्ति बालकों के राष्ट्रीय तथा भावनात्मक व्यक्तित्व के विकास में लगा सकते हैं। इस पक्ष को सबल बनाने में मातृभाषा का बहुत बड़ा हाथ है। इस तरह मातृभाषा शिक्षण द्वारा भाषासम्बन्धी ज्ञान तथा उसका उपयुक्त प्रयोग, दोनों ही पक्षों पर पूरा-पूरा ध्यान दिया जा सकेगा।

सुविधा के लिए भाषासंबन्धी योग्यताओं का विभाजन सुनने/बोलने, पढ़ने और लिखने की योग्यताओं में किया जाता है पर ये सभी योग्यताएँ परस्पर सम्बन्धित हैं अतः यह संभव नहीं कि हम बालकों में सुनने की योग्यता का विकास, बोलने की योग्यता के विकास के बिना कर सकें। इसी तरह लिखने की योग्यता का विकास, पढ़ने की योग्यता के विकास के बिना नहीं हो सकता। पढ़ने की योग्यता के अन्तर्गत अन्य अनेक योग्यताएँ भी सम्मिलित हैं जो न केवल भाषायी कुशलताओं से सम्बन्धित हैं बल्कि उनका सम्बन्ध तो व्यक्ति के अन्तरंग से है। इस संबंध में ध्यान देने योग्य बात यह है कि मातृभाषा की शिक्षा में केवल पढ़ने और लिखने पर ही बल न देकर सभी भाषिक योग्यताओं में विकास का प्रयास करना चाहिए।

पढ़ना कैसे सिखाएँ

पढ़ने जैसी महत्वपूर्ण कुशलता का शिक्षण बालक पाठशाला में ही प्राप्त करता है। वह अपनी पढ़ी हुई वस्तु का जीवन में उचित उपयोग करना सीख सके, यह शिक्षण का एक महत्वपूर्ण उद्देश्य है। इस उद्देश्य को पूरा करने के लिए आवश्यक है कि प्रारम्भिक कक्षाओं में ही पढ़ने में कुशलता प्राप्त करने में महत्वपूर्ण कार्य की नींव रखी जाए। प्रायः यह देखा गया है कि अनेक बालक अपनी पाठशाला की पढ़ाई पूरी नहीं कर पाते और उसे अधूरी ही छोड़ देते हैं। इसका एक कारण यह भी है कि वे पाठशाला में पढ़ी गई विषय-वस्तु को समझने में असमर्थ रहते हैं तथा उचित आनंद भी प्राप्त नहीं कर पाते। यदि हमारे पास एक सही दृष्टिकोण हो,

यदि हमें पढ़ना सिखाने की सही पद्धतियों का ज्ञान हो तो हम इस विषय में अपने बालकों की अच्छी तरह से सहायता कर सकते हैं। अतः सभी आग्रहों से मुक्त रहकर पढ़ना सिखाने के लिए मातृभाषा की प्रकृति को समझते हुए भाषा-वैज्ञानिक तथा मनोवैज्ञानिक दृष्टि से ऐसे समन्वयवादी मार्ग का अनुसरण करना उपयुक्त रहेगा जो अपने देश की वर्तमान परिस्थिति में शिक्षक के लिए सहजग्राह्य हो और बालकों के लिए रोचक तथा उपयोगी हो।

पहली कक्षा में प्रवेश लेने वाले बच्चों के लिए पढ़ने की प्रक्रिया बिल्कुल नई चीज होती है इसलिए मातृभाषा-शिक्षण का प्रारंभ सीधे अक्षर-ज्ञान से नहीं किया जाना चाहिए। प्रारंभ में बालकों की रुचि के अनुरूप पशु-पक्षियों, सवारियों और घर के आस-पास के वातावरण से संबंधित रंग-विरंगे चित्रों से सज्जित चार्ट आदि के आधार पर बातचीत करना उपयोगी होगा। धीरे-धीरे बच्चों का ध्यान पुस्तक में दिए गए चित्रों पर केन्द्रित करना और इस प्रकार रोचक और उपयोगी बातचीत के लिए आधार प्रस्तुत करना आवश्यक होगा। इससे बच्चों की आँख पुस्तक में छपे किसी चित्र का नाम देखने के लिए प्रशिक्षित होगी। इससे बच्चों की स्वाभाविक झिझक तो दूर होगी ही, साथ ही साथ भाषा का विकास तथा उसे समझने की शक्ति में भी उत्तरोत्तर वृद्धि होगी।

मातृभाषा के लिखने के ढंग जैसे कि हिन्दी लिखने का स्वाभाविक क्रम बाएँ से दाएँ और ऊपर से नीचे है, से भी बालकों का परिचय होता है। वे चार्ट तथा मुद्रित पठन-सामग्री से विशिष्ट भाषा के स्वाभाविक क्रम का अभ्यास अनजाने में ही करते रहते हैं।

पढ़ना कोई एकांगी क्रिया नहीं है। पढ़ना सीखते समय बालक विभिन्न ध्वनियों को सुनकर उनमें विभेद करता है। वह विभिन्न लिपि-चिह्नों के मिश्रण से बने शब्दों को देखता है, उन्हें पहचानता है और उनके अर्थ समझता है। अतः पढ़ना सिखाते समय क्रमबद्ध रूप से किसी भाषा के लिपि-चिह्नों को दोहराकर, उनकी ध्वनियों और लिखित-संकेतों से बालकों का परिचय करवाना मात्र ही अपेक्षित नहीं है। मातृभाषा का पढ़ना सिखाते समय इस बात का विशेष महत्व है कि बालक के पूर्व अनुभवों द्वारा अर्जित भाषा के मौखिक ज्ञान की पृष्ठभूमि का लाभ उठाते हुए, भाषा विशेष में बहु प्रयुक्त लिपि-चिह्नों का पढ़ना पहले सिखाया जाए और क्रम प्रयुक्त लिपि-चिह्नों का बाद में। जिन लिपि-चिह्नों की आवृत्ति भाषा में अधिक है अर्थात् बारम्बारिता की दृष्टि से जिन लिपिचिह्नों का स्थान पहले है, उन्हें लिखाया जाए। इससे एक लाभ होगा कि कुछ ही लिपि-चिह्नों को सीखने के बाद बालक अपनी मातृभाषा के प्रतिदिन प्रयोग में आने वाले परिचित शब्दों को अनायास ही शीघ्रतापूर्वक पढ़ने लगेगा और पढ़ने में उसकी रुचि बढ़ती जाएगी।

उदाहरण के लिए, हिन्दी के सभी लिपि-चिह्नों के प्रयोग की आवृत्ति समान नहीं है। न, ल, प, ब, स, क, र, घ, आदि व्यंजनों का प्रयोग छ, ठ, ण, ट, ष, आदि की तुलना में कहीं अधिक होता है। कई स्वरों की तुलना में उनकी मात्राओं का प्रयोग अधिक होता है। बालकों को यदि अधिक प्रयुक्त लिपि-चिह्न पहले सिखाए जाएँ तो वे उनसे बनने वाले अधिकाधिक शब्दों को सरलता से पढ़ना सीख सकेंगे। प, न, १, १, इन चार लिपि-चिह्नों को सीखने के बाद बालक पान, पाना, नाना, नानी, पापा, पीना, पानी, पी, नाप, नापना, आदि अनेक शब्द

तथा—“पानी पी”, “नानी पानी पी” आदि वाक्य पढ़ सकते हैं। इसका एक लाभ यह भी है कि बालक प्रारंभ से ही सार्थक पठन का अभ्यास कर सकते हैं।

एक बार में तीन या चार लिपि-चिह्नों का परिचय कराया जाए। उनकी ध्वनि तथा आकृति से भली-भाँति परिचित हो जाने पर, उनके योग से बनने वाले परिचित शब्दों को पढ़ने के अभ्यास के लिए दिया जाए। इससे यह लाभ होगा कि इनके योग से बनने वाले शब्दों और इन शब्दों के मेल से बनने वाले वाक्यों को पढ़ने की योग्यता का बालकों में साथ ही साथ निरंतर अभ्यास होता जाएगा। पहले सीखे गये शब्दों की आवृत्ति आगे दी गई पठन सामग्री में निरंतर होती रहेगी जिससे छात्रों के पढ़ने में गति आएगी। इस प्रकार पढ़ना सिखाने पर कुछ ही सप्ताह में बालक परिचित लिपि-चिह्नों के योग से बनी कोई भी सामग्री पढ़ने में समर्थ हो सकेंगे। एन.सी.ई.आर.टी. द्वारा विकसित इस पद्धति द्वारा पढ़ना सिखाने पर बालक कुछ सिद्धान्तों को समझने के बाद स्वयं सीखने का उद्योग कर सकेगा।

सभी लिपि चिह्नों का परिचय हो जाने पर पारंपरिक वर्णमाला का भी परिचय करा देना चाहिए।

शिक्षक को पहली कक्षा के बालकों को मातृभाषा के रूप में हिन्दी पढ़ाते समय एक समस्या का और सामना करना पड़ता है। पहली कक्षा में आने वाले बालक अपने घर में हिन्दी की विभिन्न बोलियों का उपयोग करते हैं परन्तु पाठशाला में आने पर तथा पाठ्यपुस्तकों द्वारा उन्हें परिनिष्ठित (मानक) हिन्दी पढ़ाई जाती है। इस स्थिति में ऐसे बालकों को हिन्दी पढ़ाने का कार्य व्यवस्थित रूप से कराया जाना चाहिए।

हिन्दी की विभिन्न बोलियों का उपयोग करने वाले बालकों को भाषा सीखने में कठिनाइयाँ आती हैं।

- क. मानक हिन्दी के शब्दों की ध्वनि प्रणाली सीखने में
- ख. शब्द के सही व्याकरणिक रूपों को सीखने में
- ग. वाक्य रचना सीखने में

हिन्दी भाषा-भाषी प्रान्तों में प्रचलित बोलियाँ बोलने वाले पहली से तीसरी कक्षा के बालकों के शब्द भंडार पर एक शोध द्वारा प्राप्त परिणामों के अनुसार उनके शब्दों में काफी विविधता पाई गई है। यह विविधता शब्दों की ध्वनियों, रूपों तथा बनावट तक ही सीमित नहीं है। कहीं-कहीं दूसरे शब्दों का भी उपयोग किया गया है और वाक्य की क्रिया भी बदल गई है।

शिक्षक को इस समस्या की पूरी जानकारी होनी चाहिए। उन्हें ऐसे शब्दों और ध्वनियों की सूची बना लेनी चाहिए जो बालकों को हिन्दी ठीक तरह सिखाने में कठिनाई पैदा करती हैं। इस समस्या का निवारण हम इस प्रकार से कर सकते हैं—

- क. शिक्षक को बोलते या पढ़ते समय अपने उच्चारण के बारे में बहुत सतर्क रहना चाहिए।
- ख. शिक्षक को बालकों की कक्षा या कक्षा के बाहर मानक रूप में बोलने के लिए प्रोत्साहित करना चाहिए तथा जहाँ वे गलत उच्चारण करते हों उसी समय उसे सुधारना चाहिए।

- ग. शिक्षक को बालकों से अपने द्वारा कही गई कहानी सुनने और फिर बालकों द्वारा उसे कहलाने तथा अपनी ओर से कहानी कहने का अभ्यास करवाना चाहिए।
- घ. शब्दों का शुद्ध उच्चारण, बार-बार कहलवाया जाए तथा संभव हो तो टेपरिकार्डर के प्रयोग द्वारा बार-बार शब्द सुनकर, उसका शुद्ध उच्चारण करवाया जाए
- ड. शिक्षक बालकों को ऐसे अभ्यास दें जिससे वे मिलती-जुलती ध्वनियों के सूक्ष्म भेद सुन सकें और बोल सकें।

शब्द-भंडार

पाठशाला में प्रवेश लेनेवाला औसत बालक अपने प्रतिदिन के व्यवहार में लगभग बारह सौ शब्दों का सार्थक प्रयोग करता है। वह पाठशाला न आने पर भी अपने आसपास के वातावरण तथा प्रतिदिन के व्यावहारिक जीवन से अपने लिए उपयुक्त शब्द-भंडार एकत्रित कर लेता है और आवश्यकतानुसार उसका प्रयोग करता है। बालकों के बोलचाल के इन्हीं शब्दों को आधार बनाकर प्राथमिक कक्षाओं में उनके शब्द-भंडार में उत्तरोत्तर वृद्धि की जाती है। बोलचाल के शब्द-भंडार तथा पढ़ने के शब्द-भंडार में अंतर होता है। शुरू-शुरू में पढ़ना सीखने पर बालक अपनी बोलचाल के शब्दों का व्यवहार मौखिक अभिव्यक्ति में ही कर पाता है। शब्दों के प्रत्यय तथा उनके प्रयोग के विषय में निश्चित होने पर भी लिखित-संकेतों अर्थात् लिपि-चिह्नों की जानकारी तथा उनका उपयुक्त अभ्यास न होने के कारण पठित-सामग्री तथा लेखन में उसका प्रयोग नहीं कर पाता। पाँचवीं कक्षा के अंत तक बालक का शब्द-भंडार बारह सौ शब्दों से बढ़कर ढाई से तीन हजार (2500-3000) शब्द तक हो जाता है। यद्यपि प्रयोग की दृष्टि से पढ़ने की शब्द संख्या इससे बहुत अधिक होगी, क्योंकि पढ़ना सीख लेने पर बालक परिचित शब्दों के संदर्भ में अपरिचित शब्दों की आकृति तथा उनके अर्थ भी समझ लेगा। पाठ्य-पुस्तकों में पाठों में प्रयुक्त नए, विशेष रूप से कठिन शब्दों के अर्थ बालकों को समझा दिए जाने पर उनसे निर्मित अन्य अनेक शब्दों के अर्थ से अनायास ही प्रसंग-संकेत द्वारा जान लेते हैं। इन शब्दों के अतिरिक्त सहायक सामग्री तथा अन्य विषयों के अध्ययन के द्वारा बालक और बहुत से शब्दों से परिचित हो जाते हैं।

मौखिक अभिव्यक्ति

मौखिक अभिव्यक्ति का हमारे जीवन में बहुत महत्व है। हम अपने अधिकांश कामकाज मौखिक रूप से चलाते हैं और हमारा अधिकतर समय मौखिक रूप से ही विचारों के आदान-प्रदान में व्यतीत होता है। आजकल की परीक्षा प्रणाली में मौखिक अभिव्यक्ति की उपेक्षा कर केवल लिखित परीक्षा के आधार पर ही मूल्यांकन किया जाता है। इसलिए विद्यालयीय जीवन में मौखिक अभिव्यक्ति के विकास को उतना स्थान नहीं दिया जाता। वास्तव में होना तो यही चाहिए कि प्राथमिक कक्षाओं की तीन चौथाई परीक्षा मौखिक हो और शिक्षक अध्यापन के अधिकांश समय का उपयोग बालकों की मौखिक अभिव्यक्ति के अवसर प्रदान करने में व्यतीत करें।

पाठशाला में प्रवेश लेने के बाद प्रथम कुछ सप्ताह बच्चों को पाठ्यपुस्तकों से न पढ़ाकर मौखिक रूप से ऐसी कुशलताएँ सिखाने में लगाया जाना चाहिए जिनसे बालकों को आगे चलकर पढ़ना-लिखना सीखने में सुविधा हो। भारत में लगभग 90 प्रतिशत बालकों के लिए पाठशाला आने का यह पहला अवसर होता है क्योंकि बहुत कम बालक बाल-विद्यालयों या नर्सरी (ऑगनवाड़ी) में जा पाते हैं। अध्यापक की देखरेख में अपनी आयु के तीस-चालीस बालकों में घर के किसी अपने व्यक्ति की सहायता के बिना बैठने में उन्हें डर सा लगता है। इस आयु वर्ग के बालकों में एक स्वाभाविक झिझक भी होती है। ऐसी अवस्था में मौखिक रूप से बातचीत द्वारा शिक्षक उनकी झिझक को दूर कर सकता है। उनसे इस प्रकार के विषयों पर बातचीत की जाए कि उसे लगे कि पाठशाला का वातावरण घर से बहुत प्यारा अथवा अधिक भिन्न नहीं है। इससे बच्चे में आत्मविश्वास बढ़ेगा और उनका व्यक्तित्व खुलेगा।

पाठशाला के अन्य कार्यक्रम तथा प्राथमिक कक्षाओं में पढ़ना सिखाने में भी मौखिक अभिव्यक्ति ही सहायक होती है। अपने विचारों को दूसरों के सम्मुख रखना और दूसरों की कही हुई बात को समझना, ये बातें पढ़ना सीखने तथा किसी भी प्रकार का ज्ञान प्राप्त करने के लिए अत्यंत महत्वपूर्ण हैं। मौखिक भाषा अनुभवजन्य घटना तथा लिखित रूप के बीच की कड़ी है, इसी के द्वारा बालक सारी बात समझ सकता है क्योंकि वह स्वयं अपनी बात कहने में मौखिक अभिव्यक्ति (जो कुछ है बोल कर कह सकता है) का लिखित रूप मात्र है। जिस बालक के घर में बोलने पर कोई अंकुश नहीं होता, जिस बालक के प्रश्नों और समस्याओं को धैर्यपूर्वक सुना जाता है उसे भाषा की सभी कुशलताओं में अनायास ही योग्यता में अनुभव होता है और वह उनका मौखिक विवरण दे सकता है, उसे छपे हुए शब्दों के अर्थ समझने में भी अपेक्षाकृत आसानी रहती है। पाठशाला के सभी विषयों को समझने की शक्ति उसमें विकसित हो जाती है।

भाषा चिन्तनशीलता का भी आधार है। भाषा का ज्ञान व्यवहार से आता है। बालक सबको बोलते हुए सुनता है और सुनकर स्वयं भी उसका प्रयोग करने लगता है। अतः शिक्षक होने के नाते हम उसे ऐसे अधिक से अधिक अवसर प्रदान करें जिससे वह मौखिक भाषा का प्रयोग करने में समर्थ हो सके।

इन कक्षाओं में भाषा-संबंधी, योग्यताओं के मूल्यांकन का आधार भी मौखिक अधिक हो और लिखित कम।

मातृभाषा का अन्य विषयों से सह संबंध

जैसा कि पहले कहा जा चुका है कि मातृभाषा का शिक्षण विद्यालय के पूरे दिन के कार्यक्रम का अभिन्न अंग है। छोटे बालकों को पढ़ते समय ऐसा नहीं लगता, ऐसा नहीं लगना चाहिए कि भाषा छोड़कर किसी एक विशिष्ट घंटे में कोई अन्य विषय पढ़ाया जा रहा है क्योंकि सभी विषय भाषा की सम्पन्नता को बढ़ाते हैं। भाषा-शिक्षण तो योग्यता-केन्द्रित नहीं है। भाषा के शिक्षण के लिए भी अन्य विषयों से विषय-वस्तु का चयन किया जाता है अतः जहाँ तक हो सके शिक्षक कहानी या पाठ में आये हुए विभिन्न विषयों का पाठशाला में पढ़ाए जाने वाले अन्य विषयों की संगत बातों से संबंध स्थापित करें। उदाहरणार्थ चिड़िया के विषय में कही

गई कहानी के साथ सामान्य रूप से विज्ञान के विषयांश के संदर्भ में चिड़ियों, उनकी आदतों, उनके भोजन, उनके रहने और अन्य सम्बन्धित विषयों की चर्चा करने का अवसर मिल सकता है।

कहानी में भोजन के संबंध में आने वाले किसी प्रसंग से स्वास्थ्य, भोजन के पोषक तत्व आदि विषयों पर भी चर्चा की जा सकती है। हमें यह स्मरण रखना चाहिए कि भाषा का पाठ पाठ्यक्रम का एक सबसे अलग विषय नहीं अपितु सभी से जुड़ा व गुंथा है। भाषा के पाठ में अन्य विषयों के साथ संबंध जोड़ने की अधिक संभावना होती है और शिक्षक को इन संभावनाओं का लाभ उठाकर बालकों को पढ़ाना है।

नैतिक मूल्य

नैतिक मूल्यों से तात्पर्य अच्छे संस्कारों से है जो हम बालकों में डालना चाहते हैं। छोटे बच्चों को प्यार, सहायता, बांटकर उपयोग करना, परिश्रम, ईमानदारी, दया, (पशु पक्षियों पर) समय की पाबंदी, सफाई, शिष्टाचार, बड़ों का आदर, पेड़-पौधों से प्रेम आदि और पाँचवीं कक्षा की समाप्ति तक इन गुणों के अतिरिक्त निर्भयता, अनुशासन, कर्तव्यपालन, देशप्रेम, परस्पर सहयोग, सहनशीलता, वैज्ञानिक दृष्टिकोण का विकास, उत्तरदायित्व की भावना, श्रम के महत्व को समझना, दूसरों की सम्पत्ति, प्राकृतिक साधनों तथा सार्वजनिक सम्पत्ति का ध्यान रखना, विभिन्न धर्मों का आदर करना आदि चारित्रिक गुणों का विकास शिक्षक स्वयं के उदाहरण द्वारा, पठन सामग्री द्वारा तथा अतिरिक्त सहायक सामग्री द्वारा उपरोक्त गुणों को बालकों के सम्मुख रखें और उनमें सद्प्रवृत्तियों के विकास की ओर ध्यान दें।

व्याकरण

प्राथमिक कक्षाओं में व्याकरण की औपचारिक शिक्षा न देकर अनौपचारिक ढंग से भाषा के व्याकरण सम्मत प्रयोग सिखाने पर बल दिया जाता है। तीसरी कक्षा से व्यावहारिक व्याकरण का ज्ञान देना प्रारंभ कर दिया जाए पर व्याकरण की परिभाषाओं को न रखा जाए। पाँचवीं कक्षा तक, बच्चे व्याकरण में संज्ञा, लिंग, व्यंजन का ज्ञान, क्रिया के कर्ता व कर्म तथा भूत, भविष्य एवं वर्तमान काल की पहचान वाक्यों के मुख्य अंगों—कर्ता, कर्म, क्रिया, अव्यय का यथोचित प्रयोग समझ लें। इससे व्याकरण के प्रयोग की क्षमता बढ़ती है और अगली कक्षाओं में व्याकरण का औपचारिक ज्ञान प्रारंभ होने पर पृष्ठ भूमि तैयार मिलती है।

मातृभाषा-शिक्षण के लिए कुछ व्यावहारिक सुझावः

- बच्चे कक्षा में सक्रिय रहें।
- प्रत्येक बच्चे की ओर ध्यान दिया जाए जिससे बच्चे को यह लगे कि उसे दिया गया समय केवल उसी का था।
- शिक्षक कक्षा में स्वयं कम बोलें और बच्चों को अधिक से अधिक बोलने के लिए प्रोत्साहित करें जिससे बच्चों की स्वाभाविक शिक्षक दूर हो सके।

- किसी न किसी रूप में बच्चों को प्रशंसा अवश्य ही मिलनी चाहिए। कहानी, कविता, गाना, चुटकुले आदि को समूह में सुनवाना तथा प्रशंसा में तालियां बजवाना बच्चों को बोलने की प्रेरणा और प्रोत्साहन देते हैं।
- कक्षा के सभी बालकों से सस्वर वाचन करवाएँ और अन्य कक्षाओं में सस्वर वाचन के लिए प्रोत्साहित करें।
- बच्चों के उच्चारण और वर्तनी पर हर समय ध्यान दें और उन्हें शुद्ध उच्चारण तथा वर्तनी का ज्ञान मिखाएँ।
- तीसरी कक्षा तक आते-आते बच्चे वर्तनी की अशुद्धियाँ स्वयं निकालें या एक दूसरे की अशुद्धियाँ ठीक करें।
- दैनिक जीवन में घटने वाली घटनाओं के बारे में पूछें तथा सभी बच्चों को बारी-बारी से बोलने का अवसर प्रदान करें।
- पढ़ना सिखाते समय सहायक सामग्री फ्लैश-कार्ड, शब्द-कार्ड, वाक्य फीतियाँ आदि का यथासंभव प्रयोग करें क्योंकि बच्चे दृश्य-सामग्री से शीघ्र सीखते हैं और इससे पढ़ना सिखाने में रोचकता आती है।
- बच्चों को प्रोत्साहन दें कि वे चित्र बनाएँ और चित्रों के नीचे उनके बारे में कुछ लिखें।
- बच्चों द्वारा चित्रित लिखित सामग्री को दीवार-पत्रिका पर लगाएँ जिससे अन्य बच्चे उन्हें पढ़ने तथा बनाने में रुचि लें।
- कक्षा की दीवारों को सुन्दर चित्रों और चार्टों से सुसज्जित रखें, इससे बच्चों में पढ़ने के प्रति रुचि बढ़ेगी।
- अभिनय, बालगीत, चुटकुले, पहेलियाँ, सामूहिक वार्तालाप द्वारा बच्चों की मौखिक अभिव्यक्ति का निरंतर विकास करें।
- बाल-पत्रिकाओं तथा अन्य बालोपयोगी सामग्री का चयन कर कक्षा में पढ़ाने के लिए उपलब्ध कराएँ।
- ट्रांजिस्टर, रेडियो, कैसेट-प्लेयर, टेलिविजन आदि से बच्चों का परिचय करवाएँ तथा भाषा के विकास के लिए इनकी सहायता लें।
- अंत में अध्यापन में शिक्षक तभी सफल हो सकता है जबकि वह पढ़ने के प्रति बालक में तीव्र रुचि और इच्छा पैदा कर दे। सजावट एवं सुरुचिविहीन कक्षा का कमरा बच्चों के साथ-साथ शिक्षक को भी निरुत्साहित करता है। इसलिए उसकी दीवारों पर चार्ट, चित्र सुभाषित वाक्य, अच्छी शीर्षक सामग्री लगानी चाहिए। यह कोई आवश्यक नहीं कि वे चीजें खरीदकर ही लगाई जाएँ। बहुत सी चीजें जिन्हें हम अनावश्यक समझकर फेंक देते हैं, उपयोग में लाई जा सकती हैं, केवल इस ओर ध्यान देने की आवश्यकता है।

आकर्षक कक्षा के कमरे, सुरुचिपूर्ण पठन-सामग्री और सबसे अधिक शिक्षक का उत्साह हमारे प्राथमिक विद्यालयों में नया जीवन फूँक सकते हैं।

Teaching Environmental Studies— I & II at Primary Level

Overview

The environmental studies programme at this stage aims at developing in the child an awareness and understanding of his physical and social environment in its totality, immediate and remote. Through environmental studies the child should be able to understand at an elementary level the interaction of man with his environment and with the social, economic and political institutions that function in his social environment. The immediate environment of the child provides the necessary stimulus to learning and learning in turn is directed to the study of the environment.

After studying this module, you will be able to:

- understand the concept of environment,
- know what is meant by environmental approach,
- understand why the environmental approach is necessary at the primary level,
- devise activities for teaching environmental studies at the primary level, and
- appreciate the need for the environmental approach at the primary level.

What is Environment?

The environment of an individual comprises all the natural and social factors which directly or indirectly affect his living and working conditions.

The natural environment consists of two major elements: the non-living and the living. Land, water and air form the non-living group and is collectively called the physical environment. Plants and animals form another group of living things, called the biological environment. While the physical environment is essential for the existence of life in various forms, the biological environment provides the food and other materials for the sustenance of man on earth. Man cannot survive without plant and animal life. Superimposed on the natural environment are man-made features such as farms, factories, mines, dams, buildings, roads and bridges. Both the physical and biological environment interact with each other producing a series of changes. The social environment consists of the family, school, religious places, community, public and private institutions, various services available in the community, social and religious functions, mode of production, procurement and supply of essential commodities. It

also constitutes socially acceptable habits and attitudes for effective living and functioning in a society.

Salient Features of the Environmental Approach

1. Environmental studies involve a child's organised investigation and systematic exploration of his own natural and social environment.
2. Through the study of his own immediate environment the child is expected to develop certain concepts, skills and attitudes which will eventually help him in the study of other environments in time and space.
3. Environmental studies as an approach to learning is a method of self-learning. In environmental studies, both process and content are important. The 'how' of learning gets equal emphasis with 'what' to learn. Thus 'learning-by-doing', 'problem-solving', 'discovery approach', 'activity methods', are emphasised in environmental studies to enable students to learn how to learn.
4. While environmental studies emphasises learning through immediate surroundings and direct experiences of the child, it does not restrict the child's awareness to his limited local world. It aims rather at a careful extension of the child's mental horizon from known to unknown, from immediate to remote, and from concrete to abstract.
5. The environment is used not as an end in itself but as a means to an end, the end being the all-round development of the child's personality.

Rationale for Introducing the Environmental Approach at the Primary Level

The soundness of the environmental approach is established by the fact that it is the child's own environment with which he is most familiar. The environment in which the child lives, is surely the most familiar element, which can be exploited for making the child's learning sound and effective. An approach of this kind cuts across all barriers of subjects or disciplines. As a matter of fact, the learning takes place across a very broad spectrum of the significant experiences of the child.

Methodology of Environmental Studies

For its methodology environmental studies may employ any combination of the following activities, depending upon the topic and the convenience of the teacher.

1. Providing children with opportunities to observe local environmental features, problems and phenomena and changes in the community and living things like plants or animals.
2. Allowing them to classify living and non-living things on the basis of given criteria or on the basis of criteria chosen by the children themselves.
3. Helping them to draw inescapable or obvious inferences from such observations and classifications.
4. Organising out-of-class activities to base the learning on immediate environment.

5. Helping children to prepare paper or clay models of the things they observe.
6. Guiding children in conducting simple outdoor projects such as counting the number of human beings, animals, bicycles, cars or carts passing through a given reference point, keeping note of seasonal variations in vegetables and fruits, observing the life-cycle of a common tree or an insect (butterfly).
7. Conducting oral discussions with children about their daily life, and social and physical aspects of their environment (question-answer method highlighted).
8. Telling them suitable factual or imaginative stories, reciting poems, having children sing songs and role-play as demanded by the topic and the situation.
9. Helping them to celebrate birthdays, community or national festivals.
10. Providing them with such timely topics and questions the answers to which the child can find by discussing with parents, elders or fellow-classmates.

Let us now take three examples to understand how physical and social environment may be used to teach environmental studies.

Example I

Soil as a Gift of Nature

Study of soil as a gift of nature has been included with the objective of creating awareness about the need and conservation of resources. Through this unit children are helped to understand that soil is the most important natural resource available to man. As a medium of plant growth, soil is indispensable for providing food for man and animals. Different soils are suitable for different crops. Soil formation is a slow process, it takes thousands of years to form the soil layer of few centimetres thickness suitable for cultivation. Owing to the increasing pressure of a large population and the constant use of land, soil conservation is necessary.

This topic may be taught by taking children to nearby fields and asking them to collect different samples of soils. Most children at this stage know that many foods they eat are produced through the cultivation of soil.

In order to stress the point that it is the old decaying organic matter which is most important for the growth of plants; children may be assigned the following experiment:

Let them have two different flower pots each containing sand and loam. Let them sow barley in both pots. After two weeks, the whole class should observe the results and reach the desired conclusion.

At this stage, the study of different types of soil may be taken up. The names of the major types of soil and crops for which they are suitable may be explained.

Children may be asked to observe the use of manure to restore the fertility of the soil in nearby fields. This common experience may be used to introduce the idea that the soil loses fertility when it is constantly used over a long period of time. The winds and water can also sometimes take away fertile soil from the surface of the earth. This causes soil erosion. The loss of fertility due to soil erosion and other reasons can be

recovered. Children may be encouraged to talk to farmers to know the various ways in which soil may be conserved.

At this stage, reading from the textbook about the soil may be assigned. This may be followed by a brief discussion in class. Children may further be motivated to find answers to questions such as:

1. What products do we get from the soil directly?
2. What products do we get from the soil indirectly?
3. What are the different methods of conserving the soil?

Example II

Our National Festivals and Symbols:

Study of national festivals and symbols has been included with the objective of instilling a sense of patriotism in children. Children have to be made to feel that we are all one. No matter to which part of India we belong, what language we speak, what dress we wear, all of us belong to one country, i.e. India. As such, all of us take pride and participate in national festivals. Our national symbols are the symbols of our freedom and unity. We are prepared to make any sacrifice to preserve them.

This may be taught through the actual celebration of national festivals. The national symbols are so closely-linked with the celebrations that these celebrations could be utilised to make use of some classroom-learning on the national anthem and the national flag. Although children have seen the flag earlier, this may be the first opportunity for them to make a detailed study of the flag. Use the picture of the flag to help the children to understand the significance of the colour and the wheel. Reading from the textbooks on the national flag may be assigned. This may be followed by a brief discussion in class. At this stage the teacher may introduce an actual flag and demonstrate how the flag has to be hoisted and what formalities we should observe in order to pay respect to the national flag. Children may be further motivated to find answers to such questions as:

1. On what occasions is the flag hoisted?
2. Why is it put up on some buildings and places and not on others?
3. When is it flown at halfmast?

Example III

India's Struggle for Independence

Overview

An elementary knowledge of India's struggle for independence is a part of the curriculum at this stage. A systematic historical knowledge of the struggle in details obviously cannot be given at this stage. The focus may be on providing a broad view

of the struggle, including its major landmarks and facts. This may be supplemented by children's literature in the form of biographies, stories and poems (some of which may be about child-heroes) and involving pupils in a number of activities.

Activities

1. Stories relating to the freedom movement and biographies and stories of leaders of the freedom movement may be collected. The teachers should prepare a list of suitable materials available in their languages. During many parts of the movement, young children played an active role. Many children became martyrs. Teachers may collect reports and stories relating to them.
2. Individual or group projects may be taken up to find out happenings relating to the freedom movement in the locality, and in neighbouring places. There may be a memorial or a place associated with the freedom movement close by. There may be individuals living in the locality and neighbouring places who may have been active in the freedom movement. Efforts should be made to collect information on these, to prepare a report on what happened in the locality and neighbouring places during the years of the freedom struggle.
3. Various other kinds of activities, such as a quiz, dramatisation of an event, collection and singing of songs of the freedom movement in one's own language and in other languages of the country, may be organised. Excerpts from important statements, speeches and resolutions may be selected which may be useful for display or dramatisation during the celebration of national festivals such as Independence Day.

Evaluation

Teachers could discuss the utility and effectiveness of these activities and prepare detailed suggestions for other activities, making use of the facilities available in the neighbourhood.

Multiple Class Teaching at Primary Level

Overview

Multiple class teaching implies a teaching situation in which a teacher has to teach simultaneously more than one class. There are about six lakh villages in India which are thinly populated. Generally the population in such a village is less than 500 people. Many villages have a population of less than 300 people. The small size of population has its implications for the village school. The child population in age-group 6-11 years is around 15 per cent of the total population. Therefore, only a small number of children would attend the primary school in such villages. If the teacher-pupil ratio is kept around 1:30, only one or two teachers will constitute the staff of such schools. Multiple class teaching thus becomes an inescapable reality in the Indian educational scene. This module seeks to identify the problems created by such a situation. It also attempts to outline strategies to teach children in multiple class teaching situations. The module is designed to cover the following objectives.

Objectives

After studying this module you will be able to

- identify the problems of schools where multiple class teaching is practised
- seek solutions to problems in relation to
 - a. Classroom management
 - b. Preparation of time-schedules
 - c. Teaching-learning strategies and
 - d. Other organisational aspects
- critically examine the multiple class teaching situation in a school and decide activities to improve the existing conditions and standards of such schools.

Think it Over

It is possible that you may have served in a one or two-teacher school and/or have observed some of your fellow teachers in actual teaching situations. Think of the problems and resource constraints existing in such schools. Let us have a look at these problems and constraints. Some of them will be as given in the end. Study these and prepare a list in your own situation.

Activity Sheet No. 1

Discuss the issues given below with your fellow teachers and prepare an inventory of problems—

Is the criterion of class combination with one teacher in a two or three teacher school specified?

Is the pattern of classroom teaching different from other schools?

Are the teaching practices in such schools different from those in general schools?

Is the rate of dropout of children in such schools higher than in other schools?

What is the socio-economic and general background of the children?

What are the physical and financial constraints in such schools?

Collect
Collate
Discuss

For a long time to come, the material resources in schools will have constraints, and some management and pedagogical strategies for facilitating teaching-learning in multiple class teaching situations have to be formulated to cope with the problems.

There are three major areas for seeking solutions to the problems of multiple class teaching in primary schools.

A. Developing the Classroom Management System in the Multiple Class Teaching Situations

In the multiple class teaching situation, the teacher is expected to plan and organise the classroom so as to minimise distractions due to the seating of different classes in the same room. Second, he has to create a climate for learning. Pupils of different classes sit-together. There can be odd age combinations for a single teacher as 6-year olds and 11-year olds sit together. This is bad planning. There could be homogeneous combinations if 6-year olds and 7-year olds (Classes I and II) are allotted to one teacher. In heterogeneous grouping, children of one age-group do not feel comfortable sitting, studying or even playing with the older ones. The teacher is not able to organise any collective, instructional or play-way activity. Therefore, classes should be combined on the principle of homogeneity keeping in view the proximity of age-groups so that there is also the sequential linkage of curriculum with the same teacher.

In multiple class teaching situations, the classroom seating plan should be different from the one generally used. Presently, children are seated in rows facing the same blackboard. When the teacher is teaching one class, using the blackboard, the attention of the children of other classes is distracted. Classroom arrangement should be done so as to minimise distraction and should be kept flexible so that it is suitable for the teaching-learning situation. This will vary for instructional work, group work, self-

study and indoor group activities. Children should be seated in groups facing different walls in the same room. To facilitate group work, the combination of bright, average and weak children should be done while making seating plans. In multiple class teaching, the teacher has also to plan monitorial assistance. The monitor will perform the roles of a teacher-substitute in some situations, as an assistant to the teacher in some other situations and as a fellowguide to the children in many other activities. Some bright children should be selected as monitors.

Activity Sheet No. 2

1. Discuss your observations on multiple class teaching with other teachers.
2. The problems of single teacher and two-teacher primary schools can be solved by adopting practices such as

(a) (b)
 (c) (d)
 and (e).....

Collect
Collate
Discuss

B. Planning Calendar of Activities and Time Allocation to Different Subjects.

Generally a primary school teacher teaches all the subjects to a class. In a multiple class teaching situation, the teacher can cope only with the core content and some selected activities. As the teacher is always under pressure of time, it is important to plan a time-schedule to make the maximum use of time. Suppose a teacher has to handle three classess simultaneously. He will have to depend on the assistance of monitors or some bright pupils to a great extent. How does he utilise the monitor's assistance when the teacher is busy with another class? How does he engage children in self-study in a small group? Suppose one hour has to be distributed. It could be planned as follows:

Time division of one hour	Class I	Class II	Class III
First 20 Minutes	Teacher	Monitor	Self-study
Second 20 Minutes	Self-study	Teacher	Monitor
Third 20 Minutes	Monitor	Self-study	Teacher

In multiple class teaching, the teacher should plan his instruction so that while he is teaching one class, he keeps a supervisory eye on the other two classes engaged with the monitor or in self-study.

Collective teaching is another aspect that requires planning. Some of the activities in this regard are classroom and school compound cleanliness, play-way activities,

games, story-telling, dramatisation, recitation, sports competition. Systematic planning of time leads to systematic work.

Activity Sheet No. 3

1. Write out the problems that are likely to arise if one of the teachers in a two teacher school proceeds on leave.
2. What are the advantages and disadvantages of having monitorial assistance?
3. Why is it necessary to change the nature of instructional activities in primary schools after every 20 to 30 minutes?

Collect
Collate
Discuss

C. Teaching-learning Strategies

Keeping in view societal goals, the objectives of education, the socio-economic background of the learners, the psychological and educational needs of pupils, some themes and topics for developing learning situations may be identified. The teacher may then suggest these, present and organise learning. He may demonstrate to the pupils how to engage in learning on their own in the same situation.

For example, environmental studies is a subject in the primary curriculum. In this area, there has to be a shift in emphasis from rote learning to observation of natural and social phenomena. Second, the subject matter of environmental studies could be used in teaching language, mathematics, work experience, arts, etc. In fact, the teacher will have to devise various situations to give learning experiences to children, in a coherent, consistent and integrated manner. In organising a teaching-learning approach, the foremost step is the development of a democratic atmosphere in the class. The teacher acts as a guide, a wise friend and an enlightened parent substitute. If once a cordial atmosphere is created, the children will be curious to seek, to find, to know and to understand.

Many children studying in rural primary schools come from underprivileged, poverty-stricken homes. Neither these children nor their parents understand the role of education for their economic betterment. Such children suffer from malnutrition, poor vocabulary and a low self-concept. These children need special attention in the form of special preparatory classes to learn healthy habits, hygienic living, good manners and well-articulated speech.

Children in Classes I and II should be provided encouragement and motivational incentives. Their foremost need is to develop their language skills. The second important activity is to develop observational skills. They should be enabled to sense and feel objects, study their shapes and sizes and match their similarities and dissimilarities by making comparisons. We should draw their attention to particular situations like things in motion, the growth of plants and animals, the diversity in the pattern of houses,

cattle-sheds etc. Having helped children to learn the observational skills to some extent, put searching questions to them to stimulate their observation further. At a later stage the children may be divided into small groups and encouraged to describe their observation and experiences. An attempt to systematise their learning experience should be made.

For Classes III-IV, another approach has to be followed. We may help children to measure things available in the classroom and outside. We could discuss with them different seasons with reference to food, clothing and shelter. Sometimes we organise social get-togethers and group activities. They may be exposed to situations so that they learn to appreciate the broad elements of civic and social life and participate in it effectively and usefully. Desirable social and moral values should be developed in them through various activities. Children may be given experiences to realise that there is an element of diversity in living and non-living things, but that there is also an underlying unity in the diversity. The presence of diversity, therefore, should not lead to its rejection or non-acceptance. Nor should things be graded as inferior or superior merely on grounds of their diversity.

Children at this stage have already learnt to read and write. They should be taught how to make notes of various type of observations. They could be encouraged to compare their notes and discuss their experiences with their peers. Since children are energetic, active and interested in doing things by themselves, there should be an increasing emphasis on developing manipulative skills through work-experience and games. There should be as many cross-references to other subjects, e.g., first language, mathematics, etc. This will lead to enrichment of learning experience in a coordinated manner.

Activity Sheet No. 4

1. What is the importance of organising collective teaching in multiple class teaching situations? List 15 such activities for Classes I and II and 10 activities for Classes III to V.
2. For the effective functioning of single and two-teacher schools, through what activities can we inculcate in children habits of self-study?

Collect
Collate
Discuss

Problems of Multiple Class Teaching in India

1. The curriculum and the textbooks are the same as in other schools where one teacher teaches one class. As a result the teachers have to face the following problems:

- Prescribed courses cannot be completed.
- The teaching is limited to the core subjects i.e. language and arithmetic.

Subjects such as General Science and Social Studies are not given due attention.

- Teachers have to lean heavily on the assistance of senior students, who act as monitors. Where the monitor is one of the pupils of the same class, his assistance is inadequate for instructional purposes.
 - Generally, Classes I and II are left in charge of monitors, and the monitor devotes more time to these classes than the teacher.
 - Teacher participation increases from Class III onwards, the maximum being in Class V. The entire activity of the teacher is directed towards showing better examination results.
 - There is less emphasis on games, co-curricular activities, arts and crafts. Therefore, the psychomotor and the affective domains of pupils' personality remain, by and large, underdeveloped.
2. A school's performance in the block is evaluated on the basis of the results of Class V which appears for an external promotional examination. The studies of such classes as are combined with Class V suffer very much as a result.
 3. Because of the heavy pressure of work on the teacher, he generally treats the teaching of different subjects casually and to suit his convenience. Consequently, children do not get regular and systematic instruction in different subject areas.
 4. There is no definite pattern of class combination taught by one teacher.
 5. There is no special training given to the teachers in handling multiple class teaching.
 6. The teachers find it difficult to take the children out on educational trips as envisaged in the curriculum.
 7. The teachers do not find the time to attend to remedial teaching programmes. Therefore, mistakes in spoken and written language, arithmetic, etc., remain uncorrected. This leads to poor achievement of standards.
 8. Individual attention is not given to gifted or weak children.
 9. Generally school equipment is supplied in proportion to the number of teachers. For example, in a two-teacher five-classes school situation, usually two blackboards are supplied instead of five. This requires two or three classes of the school to be engaged in a work which does not involve the use of blackboards. Instructional work is thus allowed to suffer.
 10. The instructional programmes suffer heavily when in a two-teacher school either of the teachers proceeds on leave. In such a situation single-teacher schools are closed for the day. In two-teacher schools, the second teacher has to handle almost double the number of pupils. Therefore, the instructional work of the second teacher suffers.
 11. In view of the already heavy workload, the teachers do not take the necessary interest in compulsory education enrolment drive. Moreover, little attempt is made to retain such children who show tendencies to drop out.

Teaching of Mathematics at Primary Level

Overview

The National Policy on Education, 1986 (NPE-1986) has been under implementation for the last two years. During this period, you may have known its major thrust areas, and may be aware that NPE-86 takes cognizance of "child-centred and activity-based process of learning at the primary stage of education. This means we must endeavour to relate the experiences and activities in the classroom to the child's nature, interests and level so that the learning imparted to him/her may assume meaning and usefulness. Adopting such an approach to learning helps the child in preparing foundation for further learning too."

This module will help you to understand what we mean by child-centred and the activity-based process of learning and what strategies we should adopt to teach mathematics at the primary stage. Further, it will clarify important elements which make learning meaningful and useful. With a view to providing some direction and guidance for teaching the various concepts, three important concepts, namely place value; division of whole numbers; perimeter, area and volume are discussed in this module.

Objectives

After reading the module you should be able to:

- state the most important factors to be taken into account in the process of learning mathematics,
- explain the term "child-centred and activity based process of learning" in the context of mathematics,
- state broadly the desirable teaching-learning strategies to be adopted at the primary stage for teaching various concepts and skills of mathematics,
- adopt, after suitable modification, the suggested strategies to introduce and extend the learning of the concepts of place value; division of whole numbers; perimeter, area and volume,
- prepare/design lesson plans on other concepts/topics in the light of the strategies suggested in the module.

Self-Check Questions

Before you proceed with the module, answer the following questions so as to find out in what way, and to what extent, this module has helped you to modify your approach to teaching mathematics at the primary stage.

- (1) What are the major thrust areas highlighted in NPE-86, particularly, those concerning the content and process of learning mathematics?
- (2) What do you understand by the "child-centred and activity-based process of learning" mathematics?
- (3) What are the most important factors to be taken into account in the learning situation?
- (4) How do you introduce and extend the concepts of place value; division of whole numbers; perimeter, area and volume?

1. Focus in Learning

Two of the most important factors in the learning situation are:

- the basic interest, which stimulates efforts on the part of the child; and
- a sense of achievement, which gives the child a feeling of satisfaction about the results of his/her efforts.

An essential pre-condition of effective learning, specially in mathematics, is arousal of interest in the learner/child for the content and process of learning. To develop this interest, the material must be meaningful to the child, should be within his scope of understanding and should be based upon his past experience. This means that the teacher will need to direct activities and experiences so that they are adjusted to the needs and abilities of the children, both as a group and individually. Success must follow the child's efforts if interest is to be maintained. A feeling of satisfaction is necessary for effective learning. Accordingly, the task should be within the child's capabilities and the work should bring praise for the child.

2. Activity-Based Process of Learning

The psychology of learning confirms that the activity-based process of learning mathematics would help children to learn mathematical concepts thoroughly. The child becomes an active participant in the learning process through his involvement in realistic and meaningful activities. Activities carefully selected and organised by teachers can stimulate children in becoming discovery-minded and in perceiving patterns and generalisations. In such a situation, the child is highly motivated and is totally involved in learning mathematical concepts. The activity approach ensures the smooth transition for the child from his world of play to the world of school. He/she does not feel that he/she has suddenly been transported from his old world of play to an atmosphere which is very formal. This approach helps the child to maintain his interest and develop a positive attitude towards the study of mathematics.

Activity Sheet No. 1

Explain, what you understand by the term "child-centred and activity-based process of learning" by means of examples drawn from the area of mathematics.

Collect
Collate
Discuss

3. Teaching-Learning Strategies

While discussing the appropriate teaching-learning strategies, the adoption of which would ensure the attainment of the desired specified learning outcomes by all the children, the students may be grouped into two major units:

1. group of students of Classes I and II.
2. group of students of Classes III, IV and V.

The age of the first group would range from 5+ to 7, i.e., the age characterised by the pre-operational stage, according to Jean Piaget. Children of this age are deeply interested in games. With the help of games of aiming, chasing, hiding, board-and-card games, children are able to understand number concepts well. Research findings indicate the effective utilisation of manipulative materials, discussing children's observations and forming generalisations, when based on their everyday experiences lead to the better learning of mathematics by children. Of course, this approach calls for the provision of necessary materials. To make classroom teaching attractive, interesting and easily graspable, a variety of teaching aids need to be used in the teaching-learning process. In fact, each primary school should have some sort of mathematical kit equipped with inexpensive aids. Such aids can easily be improvised with local materials. Children of this stage need to be allowed to work together and to work out mathematical truths and facts for themselves. Correcting and being corrected by peers in group work may be a more meaningful experience than completing worksheets individually and having them checked by the teacher.

Children of the second group, ranging from 7 to 10 or 11 years belong to the concrete operational stage. This stage marks a beginning of certain types of logical thinking in children. Thinking logically is necessary to understand mathematical concepts. However, the child should have concrete objects as a basis for abstracting mathematical ideas. As the child manipulates objects, he is, at some point, able to disengage the mathematical idea or structure involved. It is, therefore, necessary for him/her to begin learning about abstract mathematics inductively by using objects in the physical world. It is not sufficient to "tell" or "explain" or "show". The child should derive mathematics from concrete objects, patterns and aids by his own efforts.

Bearing in mind the importance of mathematics in cultivating thinking and reasoning skills, the curriculum at this stage envisages a conceptual approach that emphasises the discovery and understanding of mathematical ideas, rather than mere mastery of isolated facts and techniques. Drill for mastery of skills is expected to be used

primarily as a follow-up to the introduction of mathematical concepts which are approached through an understanding of the overall structure of mathematics. The focus is on encouraging children to seek out and discover ideas for themselves, to look for interesting patterns and relationships and to develop their own generalisations. The curriculum envisages emphasis on problem-solving and adequate practice to attain accuracy and speed. The stress is on logical reasoning, pattern, structure and skills, rather than on mastery of skills alone.

This discussion makes it imperative to evolve a teaching-learning environment which facilitates problem-solving by children. Children should be encouraged to think, question, experiment, estimate, explore and seek explanations. The teaching-learning process should provide opportunities for learners to explore with concrete materials, to participate in activities, to be involved in mathematical conversations and to confront themselves with problems in a greater variety of forms than are indicated in the book.

Activity Sheet No. 2

Write a few sentences about the appropriate teaching-learning strategies that should be adopted for teaching concepts of mathematics.

Collect
Collate
Discuss

4. Teaching Strategies for Concepts of Place Value

Division of Whole Numbers: Perimeter, Area and Volume:

In this section, some appropriate and effective strategies to teach the concepts of place value; division of whole numbers; perimeter, area and volume are suggested. It is hoped that these strategies will help you to design and adopt a similar type of strategies for teaching other concepts. The strategies suggested here are merely suggestive.

As an experienced teacher you can definitely evolve better and effective strategies of your own.

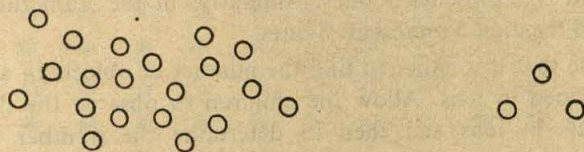
A. Place Value

Main Ideas

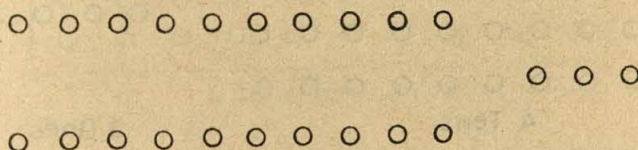
1. Our system of numeration is based upon grouping of tens.
2. Place value of a digit in a numeral
3. Extension of place value concept to decimals.

Strategies: The concept of place value, in fact, is introduced soon after the child has learnt to count up to 10. We extend the numbers beyond 10, only by using the concept of place value, though in an informal and intuitive manner.

1. Display some marbles as shown below and ask how many there are.

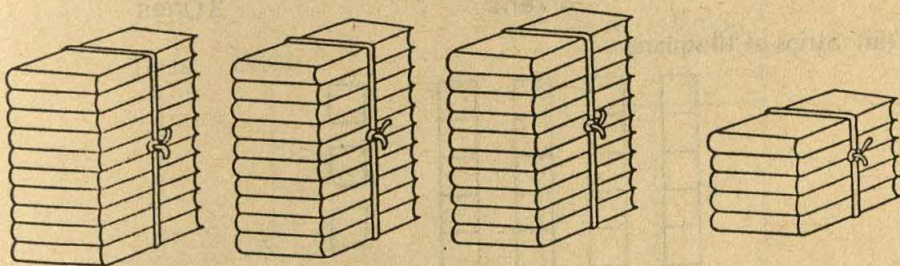


Now, display the same number of marbles by arranging them as under and ask how many there are.



Ask the pupils to tell the difference between the two types of display. The children's possible answer could be that in the second case the marbles are grouped. You may reply that in the second arrangement/display the marbles are grouped in tens. There are 2 groups of tens and 3 more. In all, there are 23 marbles. Ask the children to observe the matching $23=2$ groups of tens and 3 more.

2. Display some objects, for instance, note-books as under, and ask how many note-books there are.



The children could give you two answers. Some may say 35; and some may say 3 groups of tens and 5 more. Draw their attention to the matching

$35=3$ groups of tens and 5 more

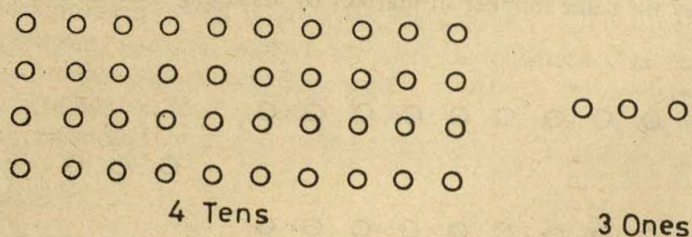
3. Repeat the activity by taking some more examples, using concrete objects. Encourage the children to count the number of objects in the collection given to them,

and present the answer in two different ways, as mentioned above.

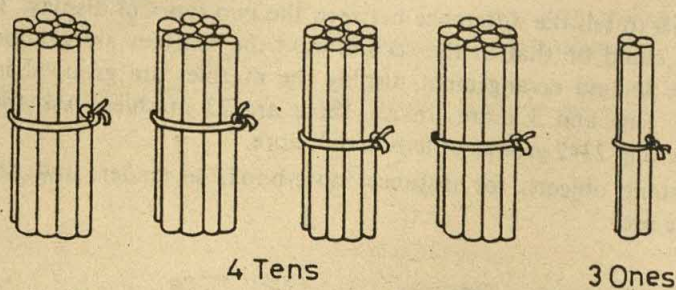
4. Now, help the children to learn that in the numeral, say 23, the digit 2 represents 2 tens and the digit 3 represents 3 ones. Similarly, in the numeral 35, the digit 3 represents 3 tens and the digit 5 represents 5 ones.

Let the pupils realise that it is easier to find the number of objects in a collection when the objects are grouped in tens. Allow the children to observe the different ways of grouping the objects in tens and then to determine the number of objects in a collection.

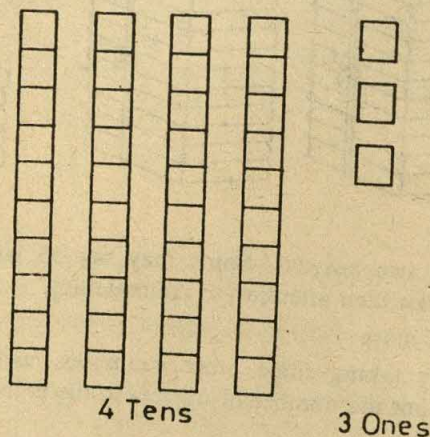
(i) Beads arranged in rows.



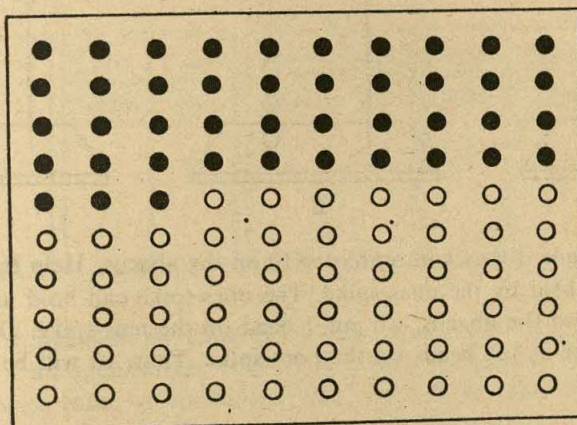
(ii) Sticks tied in bundles



(iii) Strips of 10 squares



(iv) A hundred board



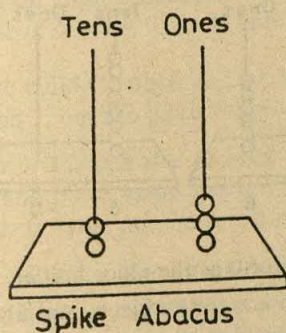
4 Tens and 3 Ones

Exercise: Ask children to indicate what a particular digit in a given numeral represents in tens or ones.

Use of Aids

A variety of aids can be used to teach the concept of place value. Two of the most commonly and effective aids are

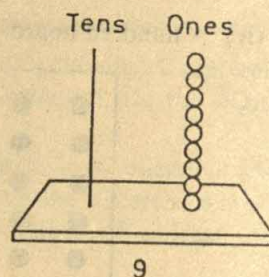
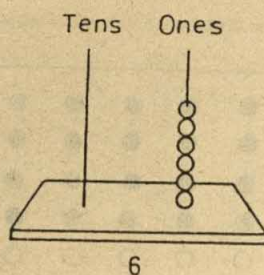
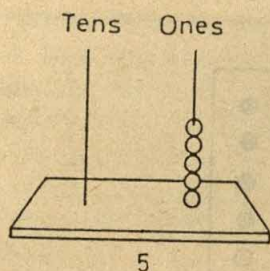
1. the spike-abacus
2. the place value chart



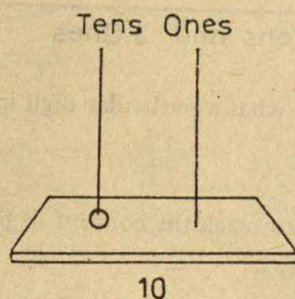
Tens	Ones
(10)	(1)
2	3

Place Value Chart

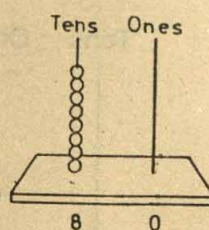
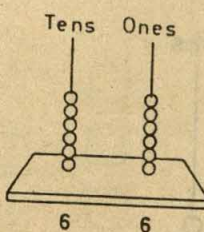
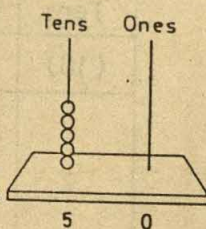
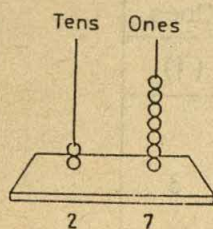
Demonstrate the meaning of 1-digit numerals, using the spike-abacus. The 1-digit numerals 5, 6 and 9 are represented as



Now, ask the pupils if they can represent 10 on the abacus. Help them to find that 10 beads cannot be held by the ones-spike. The ones-spike can hold at most 9 beads: So, to represent 10 on the abacus, we put 1 bead on the tens-spike. One bead on the tens-spike is the same as ten beads on the ones-spike. Thus, 10 will be represented on the abacus as



Following this, demonstrate how the 2-digit numerals from 11 to 99 are represented on the abacus.



At this stage, explain to the children the use of zero(0) as the place holder.

Once they grasp the concept of place value through concrete objects and abacus, there is a need to bring them to a stage where they can explain the concept of place value, using semi-concrete objects or aids. The place value chart is an example of a semi-concrete aid. Help the children to represent one-digit and two-digit numerals. Using the place value chart. For example, the numerals 7, 9, 10, 53, 69 are represented as

Tens	Ones	Tens	Ones	Tens	Ones	Tens	Ones	Tens	Ones
(10)	(1)	(10)	(1)	(10)	(1)	(10)	(1)	(10)	(1)
	7		9	1	0	5	3	6	9

An aid which could help the children to understand the concept of place value at the abstract level is an open stance. Open stances help the pupil to bridge the gap between representing place value with materials, and representing place value symbolically. For example,

$$24 = 20 + 4$$

$$56 = 50 + 6$$

Let the children fill in the boxes \square

$$86 = \square + 6$$

$$76 = 70 + \square$$

$$90 = 90 + \square$$

$$43 = \square + 3$$

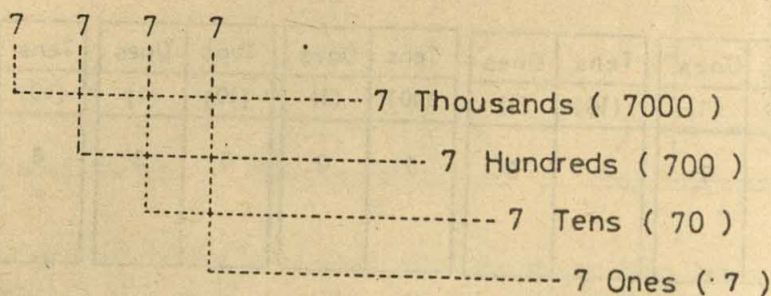
Allow the children to observe the places of digits 3 and 7 in the numeral 73. The digits 3 and 7 occupy different places. The digit 7 occupies the tens place whose value is 10; and the digit 3 occupies one place whose value is 1. Thus, in the numeral 73, the place value of 7 is 7×10 or 70 and the place value of 3 is 3×1 or 3.

Let the children observe that both the numerals 37 and 73 are formed of the same digits 3 and 7, but the place values of 7 or 3 of the two numerals are not the same.

Extension of Place Value to Large Numbers: Prepare spike-abacuses having more than 2 spikes, and place value charts having more than two columns. Extend the concept of place value to large numbers, following the strategies suggested above.

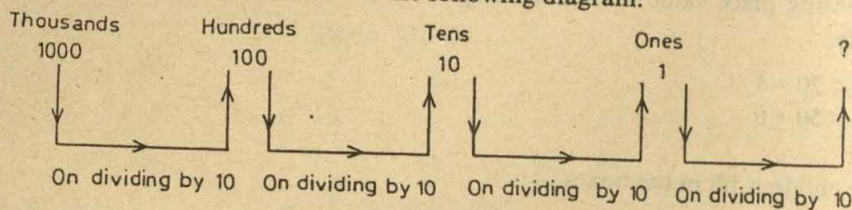
Extension of Place Value to Decimals: Help the children to review the concept of place value of a digit in a number. Help them to understand that the place value of a digit becomes 10 times more as it moves from right to left by one place. For example, the place value of 4 in 54 is 4, whereas the place value of 4 in 45 is 40. Its place value becomes 100 times as it moves from right to left by two places, and so on.

This may be followed with the learning of the fact that the place value of a digit becomes one-tenth ($1/10$) as the digit moves from left to right by one place; becomes one-hundredth ($1/100$) as the digit moves by two places; and so on. For example,



Allow the children to observe that when the digit moves to the right, its place value is obtained by multiplying the previous place value by 10.

Draw the attention of the children to the following diagram:



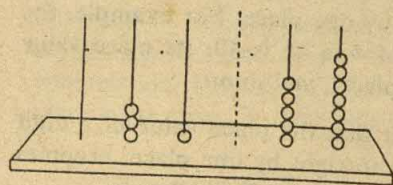
and introduce the place to the just right of the ones place as the "tenth place". Its value as $1/10$. In the same way, introduce the place to the right of the tenth place as a "hundredth place" with value $1/100$; and so on. Explain now the concept of the decimal as another way of representing the fractional number. Help the children to appreciate the use of decimals, over the fractions.

An aid consisting of the following may help the children to understand the concept further:

- one large square of size $10\text{ cm} \times 10\text{ cm}$.
- ten rectangular strips of size $1\text{ cm} \times 10\text{ cm}$
- one hundred small squares of size $1\text{ cm} \times 1\text{ cm}$

If the large square represents 1, each rectangular strip will represent $1/10$ or 0.1, and each small square will represent $1/100$ or 0.01. If we represent 1 by one rectangular strip, the small square will represent $1/10$ or 0.1 and the large square will represent 10.

The spike-abacus and the place value chart may be suitably modified to represent decimals. Allow the children to represent the decimals on them. For example, 31.57 is represented as:

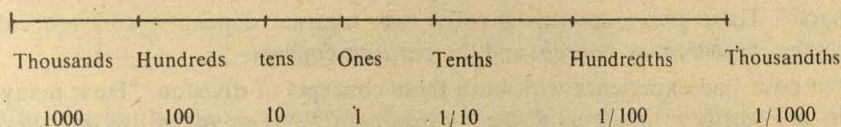


31.57

Hundred (100)	Tens (10)	Ones (1)	Decimal Point	Tenth ($1/10$)	Hundredth ($1/100$)
	3	1		5	7

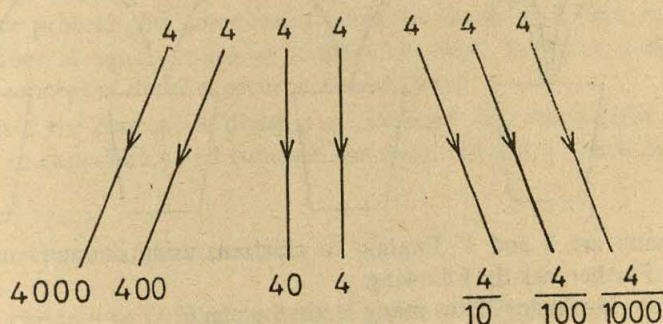
31.57

With the help of the figure given below, explain that the



ones place is basic in identifying the position of a digit in a numeral. For example, in 134.56, the digit 4 is at the one-place. The digit 3 is just on the left of the ones-place, is in the tens-place and the digit-5 just one to the right of the ones-place is in the *tenth place*. Similarly, the digits 1 and 6 are at equal distances but in opposite directions. The digit 1 is at the hundredths place and the digit 6 is at the hundredths place.

Help the pupils to discover the relationship between the place values of a digit when it occupies different places. For example:



Exercise: Give a variety of questions to the children both whole numbers and decimals, and ask them to represent them on abacuses and place value charts.

Ask the children to prepare abacuses and place value charts.

B. Division of Whole Numbers

Main Ideas:

1. Division as a measurement concept and as a partitive concept
2. Division as a shortened process of successive subtraction
3. Division as the inverse process of multiplication
4. Division of a number by a 1-digit and 2-digit number.

Strategies

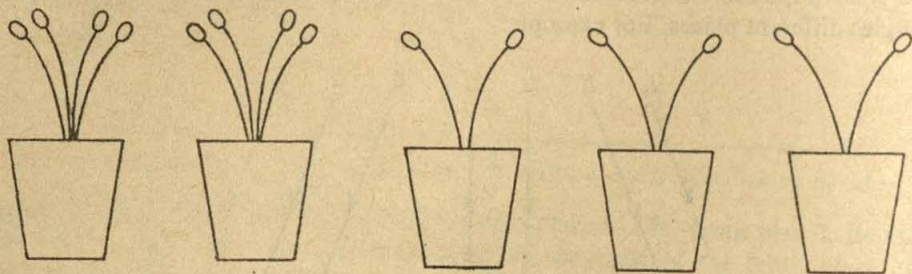
1. Two Concepts of Division

Division is the hardest of the four basic operations to teach and to learn, because it

may deal with either of the two kinds of questions. " $8 \div 2$ " may ask: "How many 2s are there in 8?", or it may ask: "If 8 is divided into 2 equal parts, how many will be there in each part?" These two questions involve two separate concepts, and are called, respectively the *measurement concept* and the *partitive concept*.

Children have had experience with both these concepts of division. "How many 25-paise coins are worth as much as a one 1-rupee coin?", "How many 10s are there in 40?"; and similar questions illustrate the measurement concept. Sharing equally, dealing out, or dividing something into a given number of equal parts illustrates the partitive concept. The children *need not hear of two concepts of division* but you, as a teacher, should be clear in this regard, so that you word questions carefully and avoid confusing them.

Given below are two activities, one of which illustrates the measurement concept, and the other partitive concept:



1. How many are 3 and 3? Explain to children, using counters or any other objects. Further, ask the following:
Two 3s are how many? How many 3s are there in 6?

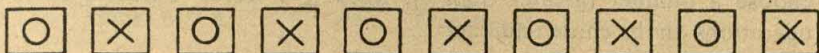
Ask the children to show the same idea on the board or their note books, using crosses (x).

Now, show 3,3 and 3 with counters placing them on the desk and ask "Three 3s are how many?" "How many 3s are there in 9?"

Problems of the following type may be given:

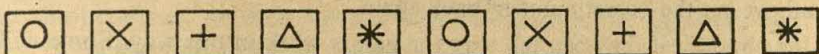
2. Take ten counters and make two equal groups of the counters. Ask "How many counters are therein each group" That is if 10 is divided or shared into two equal groups, the counters show that two 5s are 10, and that, if 10 is divided into two equal groups, there will be 5 counters in each group.

The partitive concept of division is difficult to illustrate on the blackboard or on a worksheet because, unless the child sees the answer without working out the problem, he has to have as many different ways of marking the items in the total group, as he has equal groups to make, i.e., if he has two equal groups to make from 10, he must have two ways of marking the items, as:



If he marks the items as shown above, he must then count the items bearing the little circles and the items bearing the crosses to see that there are 5 in each group.

If he has to make 5 equal groups, he must have 5 ways of marking the items, as:



Then he must count the items bearing the circles (○), items bearing crosses (×), items bearing plus signs (+), items bearing figures of a triangle (△) and items bearing stars (*) to find out how many items there are in each group.

The above process gets complicated when the number of items in the total group and the number of equal groups to be made are large. However, several examples of the partitive concept of division occur in a child's game.

Note that if the concept of division is developed in a meaningful manner, using a wide variety of experiences and concrete materials, the task of learning division will be simplified.

2. Division as Repeated Subtraction

Help the children to recall that multiplication is a rapid form of adding groups of the same size. By learning multiplication, we shorten the necessary computation to a smaller number of steps.

In the same way, a knowledge of division replaces the need for successive subtraction. For example, $20 \div 5 = 4$ tell us that there are 4 groups of 5 in 20. If we did not know this fact, we would need to keep taking groups of 5 from the total until none remained, and then count to find how many groups we had.

3. Division and Multiplication Interrelated

Division is related to multiplication in the same way as subtraction is related to addition. Children should learn related multiplication and division facts. For example:

$$6 \times 4 = 24 \quad 24 \div 4 = 6$$

and

$$4 \times 6 = 24 \quad 24 \div 6 = 4$$

Multiplication and Division are opposite processes, one undoes the other. To provide more understanding on this point, undertake the following activities:

- start with a number. Divide it by a number, say 4. Multiply the quotient by 4 and arrive at the number with which we started.

- choose a number (greater than 0). Keep it a secret. Perform the following operations on the chosen number:

Multiply by 2

Subtract 2

Add 5

Subtract 3

Divide by 2

At the end, we get the 'secret number' back again.

Ask the children if they can tell why the games work in this way. Some will see the pattern. It is because we have in (i) divide by 4 and then multiplied by 4; and (ii) we have multiplied by 2, divided by 2, added 5 and subtracted 5. In other words, it is because of the operations that we have returned to the number with which we started.

4. Finding Quotient

To find the quotient, say $30 \div 5$ we should think; Dividend Divisor Quotient Factor Product

$$30 \div 5 = ? \text{ and } ? \times 5 = 30$$

How many 5s are there in 30? Six 5s are in 30.

To get 'six', the child may use counting or manipulating objects if he is at the concrete stage; he may use pictures of objects, dot diagrams, lines or any other type of representation if he is at the semi-concrete stage; and he may use the multiplication tables if he is at the abstract stage.

Having learnt this, the following may be taught:

1. When the dividend is 0 and the divisor a non-zero number, the quotient is 0.

$$8 \overline{)0}$$

Think: $0 \div \boxed{?}$ and $\boxed{?} \times 8 = 0$

$$\downarrow$$

$$\boxed{?} = 0$$

2. When the divisor is 1, the quotient is the same number as the dividend

$$1 \overline{)7}$$

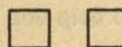
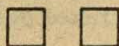
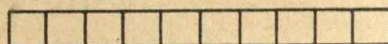
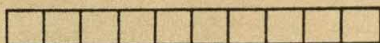
Think: $7 \div 1 = \boxed{?}$ and $\boxed{?} \times 1 = 7$

$$\downarrow$$

$$\boxed{?} = 7$$

3. When the dividend and the divisor are the same number (other than 0), the quotient is 1.

Now ask the pupils to form two equal groups from these strips and squares. Help them to form two equal groups as under:



Each group contains 1 strip and 2 squares, i.e. each group has 12 pupils. Thus, the quotient in $24 \div 2$ is 12. We write, in symbols,

$$24 \div 2 = 12$$

Check: $12 \times 2 = 24$

Repeat the process with several division sums. Now, introduce another method in which the number in the dividend is written in the expanded form, i.e. the number 24 is written as $20 + 4$ and the division is performed as under:

$$2)24 \text{ is same as } 2) \frac{10 + 2, \text{ or } 12}{20 + 4}$$

Thus, $24 \div 2 = 12$

Practise this method.

Introduce the conventional algorithm (algorithm) for division. Explain the algorithm as show below:

$$\begin{array}{r} 12 \\ 2 \overline{)24} \\ \underline{-2} \\ 4 \\ \underline{-4} \\ 0 \end{array}$$

Check $12 \times 2 = 24$.

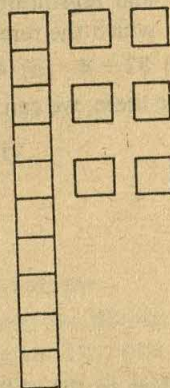
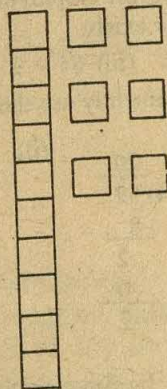
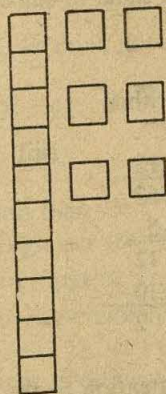
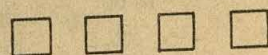
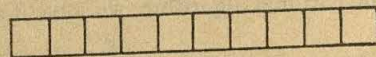
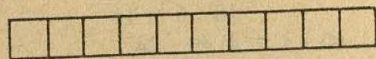
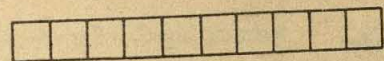
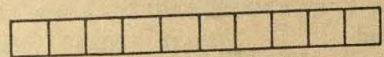
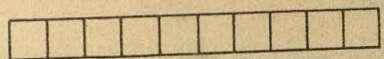
To master the algorithm, provide each child with at least 10 to 15 sums.

- (ii) Using the conventional algorithm, help the children to work out the sums of division in which there is no regrouping in the dividend, but a remainder exists. For example,

$$\begin{array}{r} 13 \\ 2 \overline{)27} \\ \underline{-2} \\ 7 \\ \underline{-6} \\ 1 \text{ remainder} \end{array}$$

- How many biscuits are there in each packet?"

strip  , we find that the following collection

[illegible]

Explain the process if it is not understood by the children. We place a strip in each of the four groups. Two strips remain. Two strips cannot be distributed into 4 groups, so we exchange them for 20 ones, to make 24 ones, in all. Now we place a square in each of the four groups, and repeat the process. After repeating the process five times, we

will be left with no square. Each group now contains 1 strip and 6 squares i.e. 16 biscuits. Thus,

$$64 \div 4 = 16$$

$$\text{Check } 16 \times 4 = 64$$

Using the expanded notation method, we do the sum as under

$$4) 64 \text{ is same as } 4) 60 + 4$$

Renaming 60 as $40 + 20$, we get $60 + 4$ as $40 + 24$.

Therefore,

$$4) 64 \text{ is the same as } 4) 40 + 24$$

So,

$$10 + 6 \text{ or } 16$$

$$4) 64 \text{ or } 4) 60 + 4 \text{ or } 4) 40 + 24$$

Using conventional algorithm, we solve it as under:

	<u>16</u>	
divisor	4) 64	quotient
	<u>-4</u>	
	24	dividend
	<u>-24</u>	
	0	remainder

Practise on conventional algorithm.

(iv) Once the child gets the conventional algorithm for division with no regrouping and regrouping, suggest employing the same in sums of the following type, in which the remainder exists.

$$(i) 82 \div 4 \quad (ii) 42 \div 5 \quad (iii) 84 \div 9$$

To solve these, we can conveniently use the algorithm.

(i)	(ii)	(iii)
$\begin{array}{r} 20 \\ 4) 82 \\ \underline{-8} \\ 2 \\ \underline{-0} \\ 2 \end{array}$	$\begin{array}{r} 12 \\ 5) 62 \\ \underline{-5} \\ 12 \\ \underline{-10} \\ 2 \end{array}$	$\begin{array}{r} 9 \\ 9) 84 \\ \underline{-81} \\ 3 \end{array}$

Explain to the children, by drawing their attention to the solution of problem (iii), why the digit 9 in the quotient is written above as 4 and not above as 8.

Introduce the division of a 3 - digit number by a 1 - digit number only when you have assured yourself that the children have mastered the division of a 2 - digit number by a 1 - digit number, i.e. they can perform division with confidence and accuracy.

Consider, for example, a division sum, $275 \div 5$. Ask the children to indentify each digit in the dividend with its place-value name. In 275, there are 2 hundreds, which cannot be divided as hundreds into 5 equal parts, and so these are changed to 20 tens to make 27 tens in all. 7 tens, when divided into 5 equal groups, each group contains 5 tens and 2 tens are left unutilised. 2 tens cannot be divided as tens into 5 groups, so these are changed to 20 ones to make 25 ones when divided into 5 equal groups and nothing is left. Thus, each group contains 5 tens and 5 ones. We write the above procedure as under:

$$\begin{array}{r} 55 \\ 5 \overline{) 275} \\ \underline{-25} \\ 25 \\ \underline{-25} \\ 0 \end{array}$$

You should be careful that problems of the following types are taken up only when they fully understand the division sum of the above type:

$$3) 603 \quad 5) 408 \quad 4) 800$$

6. Division by a 2 - Digit Number

Division by a 2 - digit number is considered to be a little more difficult. Below are two methods for introducing division sums in which the divisor is a 2 - digit number.

1st method, consider, for instance the division
sum $31) 93$

To reach the quotient, we think in terms of multiplication

$$\boxed{} \times 31 = 93$$

clearly,

$$1 \times 31 = 31, \text{ which is less than } 93$$

$$10 \times 31 = 310, \text{ which is greater than } 93$$

So, the quotient lies between 1 and 10, i.e. the quotient is a 1 - digit number.

To estimate the quotient more closely, we round the dividend and the divisor to the nearest multiple of 10. For $31) 93$, we think $30) 90$. Explain to the children that $30) 90$ is the same as $3) 9$, because dividing the dividend and the divisor by 10 leaves the quotient unchanged. In $3) 9$, the quotient is 3. Thus, the estimated quotient in $31) 93$ is 3.

$$\begin{array}{r} 3 \\ 31 \overline{) 93} \\ \underline{-93} \\ 0 \end{array}$$

Estimating the quotient in this way may sometimes give us an estimate which is too big. For example, in $13 \overline{) 69}$, we estimate the quotient as 7. But when we try 7, we find that it is too big, since $7 \times 13 = 91$. Then we have to try 6 and finally 5.

We proceed in the same way to estimate the quotient in problems of the type $13 \overline{) 237}$, we again start with multiplication

$$\square \times 13 = 237$$

Clearly,

$$\begin{aligned} 1 \times 13 &= 13 & 237 \\ 10 \times 13 &= 130 & 237 \\ 100 \times 13 &= 1300 & 237. \end{aligned}$$

So, the quotient lies between 10 and 100, i.e. the quotient is a 2-digit number.

To estimate the quotient more closely, we round the dividend and the divisor to the nearest multiple of 100 and 10, respectively. For $13 \overline{) 237}$, we think $10 \overline{) 200}$, which is the same as $1 \overline{) 20}$, or 20. Thus, the estimated quotient is 20. But

$$20 \times 13 = 260 \quad 237$$

So, we try 19 and get

$$19 \times 13 = 247 \quad 237$$

Now, we try 18 and get

$$18 \times 13 = 234 \quad 237$$

Thus,

divisor	$\begin{array}{r} 18 \\ 13 \overline{) 237} \\ \underline{-234} \\ 3 \end{array}$	quotient dividend remainder
---------	---	---------------------------------------

Check: $(18 \times 13) + 3 = 237$.

Second Method: Another method is to employ the conventional algorithm. Consider, again

$$31 \overline{) 93}$$

We identify each digit in the dividend with its place-value name. Here, in the dividend, there are 9 tens which cannot be divided as tens into 31 groups. So, we change 9 tens to 90 ones, to make 93 ones in all. Now, 93 ones can be divided into 31 groups. So, the quotient will be in ones. Now we estimate a 1 - digit number which, when multiplied by 31, gives a number nearest to 93, but less than 93. After estimating this number, perform the division as under:

$$\begin{array}{r} 3 \\ 31 \overline{) 93} \\ \underline{-93} \\ 0 \end{array}$$

Now, consider $13 \overline{) 237}$. In 237, there are 2 hundreds which cannot be divided as hundreds into 13 groups, hence 2 hundreds are exchanged to 20 tens to make 23 tens in all. 23 tens, when divided into 13 groups, show that each group has one ten and 10 tens are left undivided. We change 10 tens to 100 ones, to make 107 ones in all we, then, divide 107 ones into 13 groups to 8 ones in each group, leaving 3 ones. Thus:

$$\begin{array}{r} 18 \\ 13 \overline{) 237} \\ \underline{-13} \\ 107 \\ \underline{-104} \\ 3 \end{array}$$

While examining the solutions of division sums done by the children, we see that they

1. make use of the symbol $\overline{)}$ and not of \div (
2. place the digits of the quotient at the right places;
3. check their solutions themselves, using the relationship

$$\text{Dividend} = \text{Quotient} \times \text{Divisor} + \text{Remainder}$$

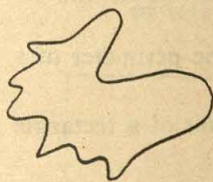
C. Perimeter, Area and Volume

(i) Perimeter

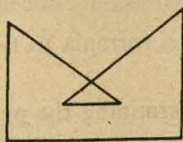
Main Ideas:

1. Concept of perimeter of a figure.
2. Finding the perimeter of a closed figure made of line segments.

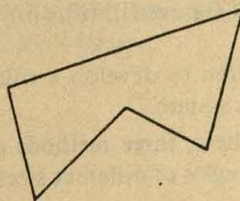
Strategies: Introduce the concept of closed figures through various types of figures. Given below are some closed figures.



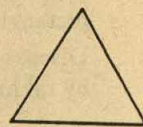
(i)



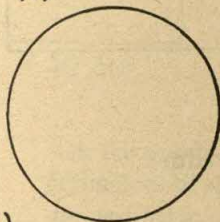
(ii)



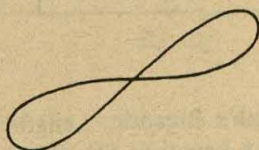
(iii)



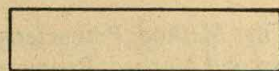
(iv)



(v)



(vi)



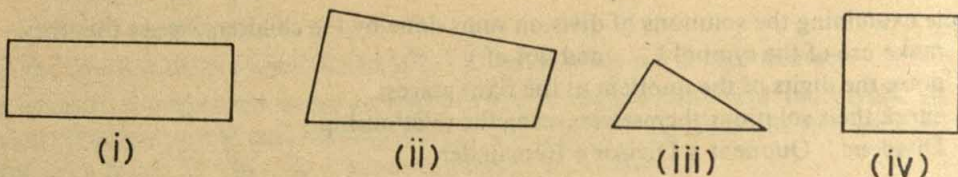
(vii)

A figure is said to be closed if its starting point and the ending point coincide. A *closed figure* which does not cut itself is called a *simple closed figure*. In the above, all the figures are closed, but figures (ii) and (vi) are not simple closed figures. All the other figures are simple closed figures.

Allow the children to observe the simple closed figures, and ask them to identify the ones made of only line-segments. Figures (iii), (iv) and (vii) are made of line-segments. Explain to the children that we speak of the concept of perimeter only in relation to simple closed figures.

Introduce the concept of perimeter into the following steps:

1. Let the children measure the sides of the given figures and find their lengths.



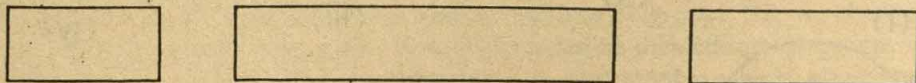
Ask them to find the sum of the lengths of all the sides of each figure. Let the sum of the lengths of all the sides of the figures be as under:

Fig.	No. of Sides	Sum of lengths
(i)	4	8 cm
(ii)	4	8.5 cm
(iii)	3	4.7 cm
(iv)	4	6 cm

Introduce the 'sum of lengths of the sides of a figure' as the 'perimeter of the figure'. Thus, the perimeters of figures (i), (ii), (iii) and (iv) are, respectively, 8 cm, 8.5 cm, 4.7 cm and 6 cm.

2. Help the children to develop a rule and a formula to find the perimeter of a rectangle and a square.

Discuss with them, three methods of determining the perimeter of a rectangle by taking rectangles of different sizes.



First Method: Perimeter = Length + Breadth + Length + Breadth

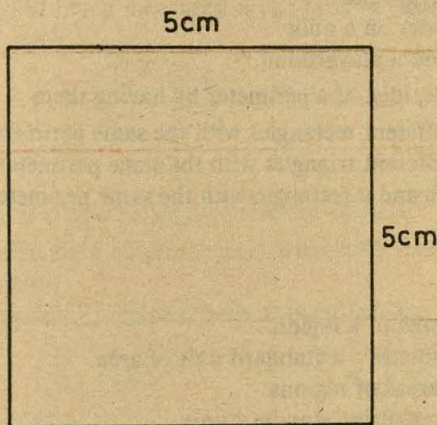
Second Method: Perimeter = (2 x Length) + (2 x Breadth)

Third Method: Perimeter = 2 x (Length + Breadth)

Thus,

The perimeter of a rectangle = $2 \times (\text{length} + \text{breadth})$

3. Since all squares are rectangles, any of the above three methods may be used to determine the perimeter of a square. Taking a square,



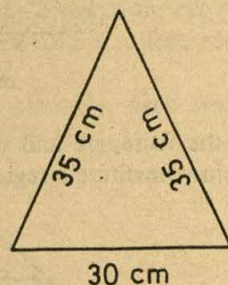
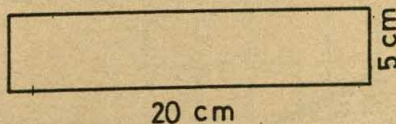
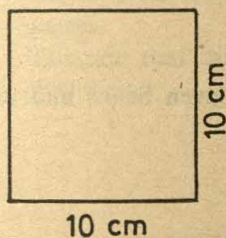
We find its perimeter by all three methods:

1. Perimeter = $5 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} = 20 \text{ cm}$
2. Perimeter = $(2 \times 5 \text{ cm}) + (2 \times 5 \text{ cm}) = 10 \text{ cm} + 10 \text{ cm} = 20 \text{ cm}$
3. Perimeter = $2 \times (5 \text{ cm} + 5 \text{ cm}) = 2 \times 10 \text{ cm} = 20 \text{ cm}$.

Thus,

The perimeter of a square = $4 \times (\text{length of the side of the square})$

4. Take a piece of rope of length, say 1 metre and a few large nails. By fixing the nails in the ground, make three different figures.



Ask the pupils to find the perimeter of each figure. Let them confirm that the perimeters of these figures are the same. Help them to discover the reason why the perimeter of each figure is the same. Since all the figures are made by the same piece of rope, the perimeter of each figure must be the same.

5. Provide a number of rectangles and squares of different sizes. Ask the children to find their perimeters. Using the formulae.
6. Provide several situations related to everyday life, in which the concept of a perimeter is involved, such as:
 1. Fencing a playground
 2. Putting a border on a quilt
 3. Running round a playground.
7. Enrich the pupils, idea of a perimeter by having them
 - draw three different rectangles with the same perimeter
 - draw three different triangles with the same perimeter
 - draw a square and a rectangle with the same perimeter.

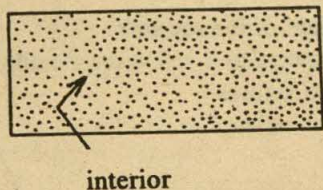
(ii) Area

Main Ideas:

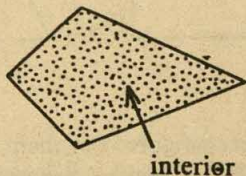
1. Concept of the area of a region.
2. The square centimetre – a standard unit of area.
3. Comparing the areas of regions
4. Measuring an area, using standard unit
5. Determining the area of rectangular regions, using formulae.

Strategies

1. Through several examples, introduce the concept of a *region*. Draw a rectangle and let the children observe it. It looks like a frame. We



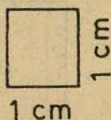
call the rectangle and its interior a region. Similarly, the figure given below and its interior constitute a region



To drive home the idea of a region, the children's attention may be drawn to various regions such as a table, a tap, a blackboard, a wall, etc.

2. The children are already familiar with the standard unit used to measure the length of a line-segment A B is one centimetre. Taking this as the 'unit of length', we may determine the length of any line-segment.

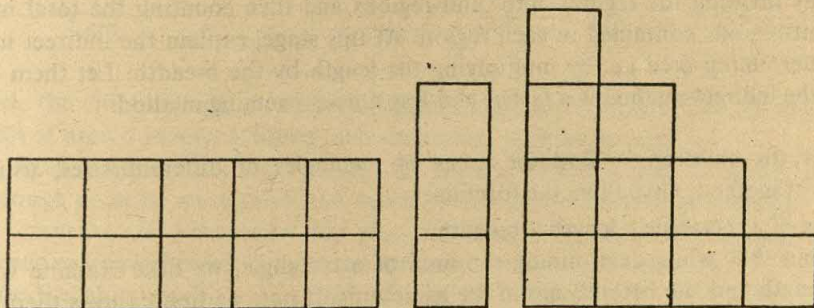
In the same way, unit of area is needed to determine the area of a region. The unit of area, is itself a region, called a unit region. The number of times the unit-region is contained in the region being measured is the area of the region. The unit-region is a square region with each



Side 1 centimetre long. It is also called a square centimetre.

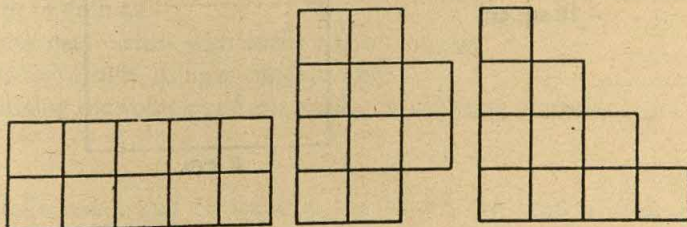
The unit-region may also be a square region with each side 1 metre long. In that case, it is called a square metre.

3. Display a number of models of regions, such as these below,



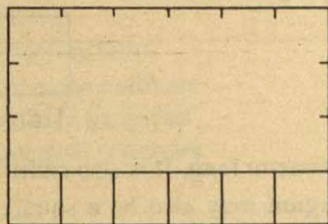
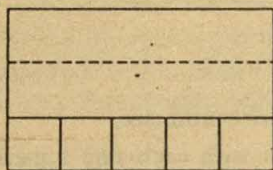
and ask the children to find out how many unit-regions (square centimetres) are contained in each region. Help the children to discover that the areas of the regions are, respectively, 10 square centimetres, 3 square centimetres, and 8 square centimetres.

4. Illustrate that many regions can have the same area. For example, each region given below



has an area of 10 square centimetres.

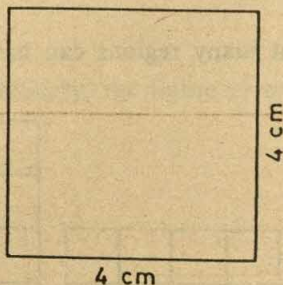
5. Provide the children with cardboard pieces of size 1 cm x 1 cm, and ask them to find areas of various regions available to them in their own environment, using the cardboard piece.
6. Having taught them to determine the area by direct measurement i.e. by determining the area in terms of unit-regions, explain the indirect method to find the area, first, of a rectangle and then of a square. Draw pictures of the following types:

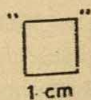


and ask the pupils to find the areas. Your pupils may arrive at the correct answer just by dividing the regions into unit-regions and then counting the total number of unit-regions contained in each region. At this stage, explain the indirect method of determining area i.e. by multiplying the length by the breadth. Let them realise that the indirect method is a faster, and less time-consuming method.

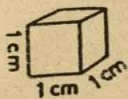
7. Allow the children to find the areas of rectangles of different sizes, using the indirect method. Give them the formula:
Area of a rectangle = length x breadth.
8. Explain that while determining the area of a rectangle, we first examine whether the length and the breadth are in the same unit. If not, we first express them in the same unit, and then determine the area.
9. Since all squares are rectangles, we can determine the area of a square too, by the indirect method. The area of the square shown is 16 square centimetres:

$$\begin{aligned}\text{Area of square} &= 4 \text{ cm} \times 4 \text{ cm} \\ &= 16 \text{ sq. cm}\end{aligned}$$



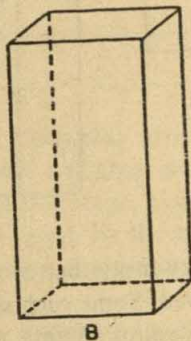
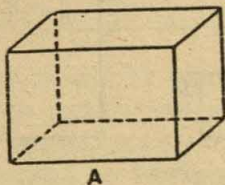


Now introduce the unit, commonly used to measure volume:



It is a cube whose edge is 1 cm long. We call it a 1-cm cube, or a *cubic centimetre*.

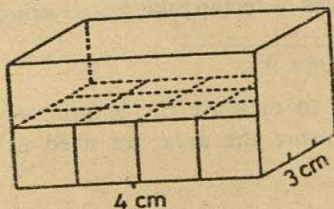
2. Display some more familiar types of solids such as:



and explain that the volumes of these solids can be found by determining the number of 1-cm cubes that can fill the solid. The number so obtained will give the volume of the solid. Let the number of 1-cm cubes, that fill the solid A, be 9. Then the volume of the solid A is 9 cubic centimetres. This is called the direct method of determining volume.

3. Equip the classroom with plentiful 1-cm cubes and many rectangular boxes of varying sizes (the inside measurements of each box should be in complete centimetres). Allow the pupils to select a box and find the number of 1-cm cubes that are needed to fill the box and then to determine the volume of the box.
4. Now allow the children to fill a box with 1-cm cubes, following the procedure given below:

- (i) Fill a layer of 1-cm cubes, covering the bottom of the box. Let the children observe that there are cubes in one row and there are 3 rows in all. This means that there are 4×3 , or 12 cubes in one layer.



Teaching and Learning of Languages

Introduction

In the total development of the child, language plays a key role and the family and the teacher must share the responsibility. In a developing country where universalisation of education is taking place, there are many first generation learners in both primary and secondary schools. This makes the teacher's responsibility much greater, as the family may often speak either a dialect or a tribal language or another regional language far removed from the standard language which is the medium of instruction. The teacher, then, must help his pupils to learn both the regional language and Hindi, as also English. Some pupils will learn either as classical language or another foreign language. What function will all these languages serve? How can the teacher present an integrated view of language learning to his pupils and motivate them? How can the teacher ensure the total development of the pupil through language learning?

Objectives

After reading this module the teacher should be able:

- to organise his experience and thinking in a problem-solving mode;
- to plan his language teaching in a wholistic fashion;
- to devise strategies for reinforcing the learning of languages;
- to make the teaching-learning activity more learner-centred;
- to help the pupil to communicate more effectively;
- to develop in the pupil basic values and attitudes;
- to encourage the pupil to find sources of knowledge, like books, newspapers, radio and television; and
- to suggest methods of data collection, analysis and interpretation appropriate to each stage of learning.

Since India is a multilingual country, teachers are aware of the many languages which exist in it side by side. Most of us speak more than one language and therefore, are aware of language-learning problems, especially in the context of learning a second language or learning a foreign language. We are also aware of the many varieties that exist—social, regional, and stylistic. For purpose of communication we use two to three languages in everyday life. As language teachers, we try to make our pupils proficient in atleast three languages.

discourse comprehension are the most essential skills in learning to read.

Activity Sheet No. 1

1. In learning to read at school what are the skills to be taught, and in what order?
2. Do you think the pupils in Class-I could find reading instruction enjoyable?
3. What special techniques and material do you use to let your pupils discover the world through reading in all classes?
4. Children often make up stories. If you write these down, would the pupils in the class be motivated to read them? Can this be used only in Class-I? What do the pupils really think of the contents of their textbook? Who can judge better what interests children?

Collect
Collate
Discuss

1. In learning to read at school the pupil learns to associate letters with sounds. He already knows the meanings of words in sentences and the discourse type that he learns to read. For most pupils who are being educated in a language they have learnt to speak at home, learning to read does not present complex problems. For pupils, who come from linguistic minority groups, disadvantaged homes, from nomadic or tribal groups, it is like a total uprooting from a familiar linguistic and social environment. It is necessary to introduce to them gradually the regional language of the area and it is advisable to teach them to read in their own language variety. Unless they speak the language, it is not very useful to teach them to read the language. However, at no time should this exercise affect their self-image. They should feel proud of their identity, language and culture. This may mean that the teacher has to learn to appreciate the culture and language of his pupils. It is also important to discuss the notion of 'correct' language. Language-use is always what is sanctioned by a social group, and therefore no usage is in any way better than another. The standard variety of language will be acquired in time by the pupils, if, in the beginning, they are not discouraged by constant criticism of the way they use languages. Standard usage is accepted by the individual, since all of us are social beings

but it cannot be imposed even upon a pupil. It has been observed that language-acquisition and cognitive growth go together. Since at the age of 6+ the pupil acquires many cognitive skills, would it not be better to practise these in the language in which the pupil thinks? Is the cognitive growth of the pupil further stimulated by his learning a second language or a foreign or a classical one? Research has shown that this is indeed true. Since each language has its own way of looking at the world, the pupil in learning languages learns to analyse the reality around him in different ways. When should these languages be introduced?

2. Although as adults we know the pleasures of reading, do our pupils find learning to read an enjoyable activity? Have we ever asked our pupils for an honest appraisal of the textbooks? What kinds of reading material would they like? Have you ever tried any experiments? What would you suggest to make learning to read enjoyable?

How does reading open windows on a wider world? Could the texts used for language teaching be selected for language use as well as for variety of content and discourse? In learning to read a new language the pupil should feel motivated by the new kind of experience the textual material offers. If he is not offered something new and exciting, there is no reason to justify his learning to read another language. It is necessary to explore areas of cultural experience peculiar to each language.

Activity Sheet No. 2

1. List kinds of textual material which your pupils prefer to read.
2. List kinds of textual material you enjoy teaching.
3. List types of textual material which are typical of your mother tongue, Hindi and English.
4. Discuss whether language is acquired better through reading interesting content material.
5. What cognitive development can take place while learning to read languages? Can you relate discourse types—kinds of texts with particular cognitive process, e.g., scientific discourse could be a training in relating cause to effect.

Collect
Collate
Discuss

The failure to learn to read may be considered one of the basic causes of the drop-out phenomenon. The National Policy on Education strongly recommends the development of the education of women, scheduled castes and tribes and other backward

sections, as well as minorities and the disabled, that their problems in learning to read must be considered. Whenever a small disadvantaged group has to perform and acquire skills to be able to work at par with the advantaged group, this does produce a certain amount of stress. Also, the material, such groups have to read, should be carefully screened so that it does not further lower their already lower self-image. Since most textual reading material is biased in favour of the advantaged, the majority, the able and is written in a language peculiar to these groups, it can affect the motivation to learn to read. It is important not only that the minority and disadvantaged groups should find place in the texts, but should also be the originators of such texts. Instead of making children read materials written for them by adults, it has been found that eliciting texts from the pupil which are written down by the teacher, acting as a facilitator where required, is more conducive to learning to read, than any other reading material. This makes learning to read a truly child-centred activity and the sense of participation helps to improve the self-image of the pupils.

We could get many clues as to what interests our pupils by encouraging them to take part in the analytical exercise of reviewing various reading texts. We may also try out the ability of our pupils to produce interesting texts and locating them.

Activity Sheet No. 3

1. What learning problems have you observed in learning to read the regional language, Hindi, English, Sanskrit?
2. Which groups of pupils show a facility in learning languages? To what causes do you attribute this facility? What kind of headstart programme could the other pupils be given to help them to overcome the handicap?
3. Do you believe in child-centred learning? How can we use this technique in textbook development and review?
4. Do you think most reading texts are biased? Can you cite any examples?

Collect
Collate
Discuss

We accept that, having learnt to communicate in the language spoken at home in an informal style, the pupil must also gradually acquire the standard variety and the formal style of the language spoken in the area. Although this does pose certain problems, especially to the disadvantaged, the tribal and to the disabled pupil, we have no doubt that this is necessary. We also accept that writing skills must follow reading skills. Similarly, both teachers and pupils understand that in a multilingual country like ours, it is necessary to have another language to unite the various language communities by a common Indian language for communication purposes. What role does the first language play in the cognitive development of the child? What contribution can the second language make to the cognitive development of the pupils?

Topic 3: Language Learning is a Universal Human Ability

1. Do you think language learning is a universal human ability, even though different pupils learn at different rates?
2. How do we ensure that the variety of languages, pupils speak at home, is respected and not held up to ridicule?
3. How do we encourage the cooperation of the family to help the child to form the right reading habits?

Collect
Collate
Discuss

In teaching languages have you considered that language acquisition is a universal human ability and therefore sooner or later all your pupils learn the languages spoken around them? However, different pupils learn at different rates. How does this affect our plan of teaching? Given the number of pupils in our class, how do we allow for individual rates of learning? How can we impart individual study skills while at the same time, teach language comprehension skills?

Activity Sheet No. 4

1. What kinds of teaching aids will be necessary for individual's language learning? Can these be used at all levels?
2. How can the pupils who learn languages with facility be encouraged?
3. How can the pupils who learn languages with difficulty be given a headstart?
4. Can we use some tools to measure and compare language learning?
5. What use can be made of radio and T V programmes already being broadcast for language learning?
6. Is there anything genetic about language learning ability?

Collect
Collate
Discuss

Language Skills: Diagnostic Inventory

- (a) *Early Development—0 to 6 years*
 - (i) Prespeech, including comprehension of language, gestures, vocalisation
 - (ii) Speech and language skills including syntax, length of sentence, responses of speech, social speech (greeting, etc), verbal direction, picture vocabulary, articulation of sounds, repetition of numbers, sentence memory and singing.
 - (iii) General knowledge and comprehension skills
 - (iv) Readiness skill
 - (v) Basic reading skills
 - (vi) Writing skills

(b) *Inventory of Basic Skills at School Entry and through the Primary School Level.*

- (i) Reading readiness skills
- (ii) Reading, including word-recognition skills, word-analysis skills, and vocabulary skills.
- (iii) Language arts including handwriting skills, grammar skills, spelling skills and reference skills.

(c) *Inventory of Basic Language Skills for Diagnostic Purposes.*

- word-recognition
- oral-reading
- reading comprehension
- functional word-recognition
- word-analysis skills
- reference
- skills using schedules and graphs
- writing
- skills using forms
- spelling
- oral communication
- readiness
- speech
- word-recognition
- oral reading
- reading comprehension
- word-analysis
- functional word-recognition
- listening
- spelling
- writing
- reference
- skills using graphs and maps

(d) *Reading Problem Checklist**

Skill	Date Observed
1 Word-Recognition and Analysis Skills	
1. inadequate sight vocabulary	
2. does not attempt to decode unknown words	

3. guesses unknown words
4. unsuccessfully attempts to decode words
5. over-relies on configuration, size or shape
6. tendency to reverse letters or words
7. has poor sound-symbol relationship skills

II *Comprehension Skills*

8. cannot recall main ideas
9. cannot remember details
10. cannot draw inferences
11. cannot draw logical conclusions
12. relies heavily on context
13. inadequate use of context

III *Oral and Silent Learning Skills*

14. word-by-word reading
15. hesitations
16. repetitions
17. ignores or misinterprets punctuation
18. inappropriate speed

19. inappropriate use of voice

20. inappropriate behaviour that accompanies reading (head movements, lip movements, whispering, pointing, poor concentration)

* Directions: Indicate the presence of the behaviour with a checkmark.

(e) *Reading Diagnosis Sheet*

Inability to locate information

Undeveloped dictionary skills

Written recall limited by spelling ability

Inability to adjust reading rate to difficulty of material

Inability to skim or skip

Voicing—lip movement

High rate at expense of accuracy

Low rate of speed

Response poorly organised

Unaided recall scanty

Fails to comprehend

Contractions not known

Unable to use context clues

Lacks desirable structural analysis

Blends, diagraphs or diphthongs not known

Vowel sounds not known

Consonant sounds not known

Guesses at words

Sight vocabulary not up to grade level

Basic sight words not known

Substitutions

Insertions

Inversions or reversals

Repetitions

Omissions

Poor pronunciation

Incorrect phrasing

Word-by-word reading

Health and Physical Education at Primary Level

Overview

Health and physical education is an integral part of the school curriculum. The National Policy on Education, 1986, maintains that the child is the focal point of all that education is meant for. It implies a reverence for the individual, with a genuine concern (by the teacher) for the growth and development of the child as a person. The child-centred approach demands a commitment to respect the child and lays emphasis more on the process than the product. In its spirit, we teachers, have to guard the respect, dignity, worth and integrity of the child.

The National Policy of Education, 1986, defines health as: "A state of complete physical, mental and social being." Health must not be mistaken for a safeguard against disease or infirmity. Health is a positive concept. It implies:

- (i) a good amount of activity-physical movement to develop motor ability;
- (ii) a good intake of food—nutrition—a balanced diet;
- (iii) adequate rest, sleep and relaxation;
- (iv) an attitude to a safe life; and
- (v) a pleasant human relationship.

The activities pertaining to health and physical education should be planned, organised and integrated into the totality of the school programme as far as possible.

The present module is designed to help you to promote activities in the area of health and physical education.

Objectives

A study of this module will help you to

- become aware of the concept of health and factors influencing health,
- become aware of common health problems of students,
- develop health habits,
- develop skills to participate in games and sports,
- create an environment in the school to promote sportsmanship among students.

Guidelines

A few points requiring teachers' consideration are:

The very nature of health and physical education is informality. This lends great

autonomy both to teachers and students. Teacher should exercise informality to bring out the best in students. The teacher must not be satisfied with the school's having a good team in a game or two as this involves only a few able students. The programmes and activities pertaining to health and physical education should be planned and provided in such a way as to reach every child at her/his pace of learning and according to his/her abilities and needs. The school staff must not rest content that one physical education teacher is doing well at his job. Every teacher should involve himself/herself in physical education activities. Teachers should develop a perspective of every child's personality and contribute towards developing the health of all the children. Very often the inadequacy of facilities in the school is blamed for the lack of proper programmes/activities in regard to health and physical education. In fact, a large number of activities can be organised as 'no-cost' activities and out of available environmental and community resources.

The school staff should develop a minimum programme of activities in health education such as the following:

- (i) identify students needing medical attention for vision, hearing, dental and other disorders pertaining to nose, throat, skin, hair, posture, etc.;
- (ii) refer the students both with mild and severe disorders to the medical specialist, school doctor, primary health centre, civil hospital, as the situation may demand;
- (iii) discuss the health and medical needs of ailing students with the medical specialist and parents;
- (iv) follow up the medical examination and suggested treatment to ensure that the students are gaining in health;
- (v) insist on immunisation against infections—diphtheria, tuberculosis, tetanus, whooping cough, cholera, polio, typhoid and other infectious diseases. It would be desirable if the school arranged for the immunisation programme of children on the school premises and attended to the immunisation needs of their families.
- (vi) Identify nutritional deficiencies and other causes which impede the growth of children, maintain a health record and provide parent counselling.
- (vii) Based on their health approval, the students are classified in groups for various physical education activities. Eventually, some of them could take a vigorous programme of physical education.

A programme of physical education activities should be drawn up. Some activities are suggested here:

- (i) Develop a programme of daily activities. Depending upon the open space available with the school, students should run or walk briskly for about $\frac{1}{2}$ km depending upon their age and state of health;
- (ii) A comprehensive plan of activities including outdoor games, small area games, athletics and yoga should be planned and the students should be

- classified for participation. The students should be rotated to provide them with scope for participation in other activities.
- (iii) The conduct of physical activities at noon or just before or after lunch is not correct. The time should be adapted to the physical state and needs of students.
 - (iv) In schools where physical education teachers are provided, the teacher should take every class at least twice a week and teach fundamental movements and skills in different types of activities. It would be desirable if other teachers also observed these classes so as to follow up the movements and postures taught to the students.
 - (v) In primary schools, physical education should be the central theme round which other activities should be built up. Play must be set in the most informal atmosphere and should be attractive to children. In fact, play has a significant role in the learner's process of self-actualisation.

Suggested Activities

Participating teachers may discuss and conduct the following activities.

Activity No. 1

Prepare a list of food items that children usually eat in a week. Analyse them, keeping in view their nutritional components and the needs of the children. What items would you suggest should be added or removed within the framework of the economy or customs of the local community? Discuss.

Activity No. 2

List the characteristics of growth and development of children of the age-groups you have been teaching under physical, intellectual, emotional and social aspects. Discuss their relevance for developing a comprehensive programme of health and physical education in your school.

Activity No. 3

What are the symptoms of common communicable diseases? Discuss. Plan a wall poster, matter for a bulletin board and messages to sensitise the students and local community to immunisation.

Activity No. 4

Prepare a health record form for individual students. Present it to your fellow-teachers, discuss and finalise it. You may use it in your school.

Activity No. 5

Prepare guidelines for students' appraisal at the beginning of the academic session on

how to act in case of an accident or injury in the school in general, in the playground, in the science laboratory, outside the school. What first-aid measures should be suggested to students in such situations.

Activity No. 6

Prepare guidelines for students' appraisal as a code of conduct with regard to corridor manners, toilet and urinary manners, washing and drinking of water, eating of lunch and snacks, buying snacks from vendors outside the school, tempering of ant hills and holes in the ground, using electrical points and gadgets, handling doors and windows.

Activity No. 7

Prepare guidelines on how to seek medical facilities in and around the community and on the need to avoid self-medication.

Activity No. 8

Prepare a list of activities in which you can help your students in the area of health and physical education. In what other activities would you like to develop expertise? Discuss with your fellow-teachers.

Activity No. 9

How would you launch a campaign for a community health programme through your students and colleagues, especially explaining the harm of tobacco, narcotics, alcohol and other intoxicants. In what way would you seek the support of the local community, its leaders and its various voluntary organisations in this mission.

Suggested Physical Education Activities for Primary Schools

- (i) Locomotion, axle motion, manipulative movements; transferring of one's weight, effective weight bearing, lifting and carrying of various weights, applying and receiving force.
- (ii) Static positions, movement in confined space and extended space, rising and falling on the ground, rolling, tumbling in a wheel.
- (iii) Pyramids
- (iv) Basic Yoga Asans
- (v) Rhythmics: movements by time and space; movements to set music; movements to clappings; creative movements.
- (vi) Rules of games children usually play and their observance.
- (vii) Relays

(viii) Open area and small area games and sports.

As teachers, one of our primary roles should be to strive for a healthy living of our students. We should be deeply concerned about every child's growth and development. The child's freedom from ailments and development of factors which contribute to the child's health and well being should be foremost in our minds.

ANNEXURE—I

**NATIONAL POLICY
ON
EDUCATION 1986**

**MINISTRY OF HUMAN RESOURCE DEVELOPMENT
GOVERNMENT OF INDIA
(Department of Education)
NEW DELHI
MAY, 1986**

CONTENTS

I	Introductory	237
II	The Essence and Role of Education	239
III	National System of Education	239
IV	Education for Equality	241
V	Reorganisation of Education at Different Stages	245
VI	Technical and Management Education	251
VII	Making the System Work	254
VIII	Reorienting the Content and Process of Education	254
IX	The Teacher	258
X	The Management of Education	259
XI	Resources and Review	261
XII	The Future	262

National Policy on Education 1986

PART-I

Introductory

1.1 Education has continued to evolve, diversify and extend its reach and coverage since the dawn of human history. Every country develops its system of education to express and promote its unique socio-cultural identity and also to meet the challenges of the times. There are moments in history when a new direction has to be given to an age-old process. That moment is today.

1.2 The country has reached a stage in its economic and technical development when a major effort must be made to derive the maximum benefit from the assets already created and to ensure that the fruits of change reach all sections. Education is the highway to that goal.

1.3 With this aim in view, the Government of India announced in January 1985 that a new Education Policy would be formulated for the country. A comprehensive appraisal of the existing educational scene was made, followed by a countrywide debate. The views and suggestions received from different quarters were carefully studied.

The 1968 Education Policy and After

1.4 The National Policy of 1968 marked a significant step in the history of education in post-Independence India. It aimed to promote national progress, a sense of common citizenship and culture, and to strengthen national integration. It laid stress on the need for a radical reconstruction of the education system, to improve its quality at all stages, and gave much greater attention to science and technology, the cultivation of moral values and a closer relation between education and the life of the people.

1.5 Since the adoption of the 1968 Policy, there has been considerable expansion in educational facilities all over the country at all levels. More than 90 per cent of the country's rural habitations now have schooling facilities within a radius of one kilometre. There has been sizeable augmentation of facilities at other stages also.

1.6 Perhaps the most notable development has been the acceptance of a common structure of education throughout the country and the introduction of the 10+2+3 system by most States. In the school curricula, in addition to laying down a common scheme of studies for boys and girls, science and mathematics were incorporated as compulsory subjects and work experience assigned a place of importance.

1.7 A beginning was also made in restructuring of courses at the undergraduate level. Centres of Advanced Studies were set up for post-graduate education and research. And we have been able to meet our requirements of educated manpower.

1.8 While these achievements are impressive by themselves, the general formulations incorporated in the 1968 Policy did not, however, get translated into a detailed strategy of implementation, accompanied by the assignment of specific responsibilities and financial and organisational support. As a result, problems of access, quality, quantity, utility and financial outlay, accumulated over the years, have now assumed such massive proportions that they must be tackled with the utmost urgency.

1.9 Education in India stands at the cross roads today. Neither normal linear expansion nor the existing pace and nature of improvement can meet the needs of the situation.

1.10 In the Indian way of thinking, a human being is a positive asset and a precious national resource which needs to be cherished, nurtured and developed with tenderness and care, coupled with dynamism. Each individual's growth presents a different range of problems and requirements, at every stage—from the womb to the tomb. The catalytic action of Education in this complex and dynamic growth process needs to be planned meticulously and executed with great sensitivity.

1.11 India's political and social life is passing through a phase which poses the danger of erosion to long-accepted values. The goals of secularism, socialism, democracy and professional ethics are coming under increasing strain.

1.12 The rural areas, with poor infrastructure and social services, will not get the benefit of trained and educated youth, unless rural-urban disparities are reduced and determined measures are taken to promote diversification and dispersal of employment opportunities.

1.13 The growth of our population needs to be brought down significantly over the coming decades. The largest single factor that could help achieve this is the spread of literacy and education among women.

1.14 Life in the coming decades is likely to bring new tensions together with unprecedented opportunities. To enable the people to benefit in the new environment will require new designs of human resource development. The coming generations should have the ability to internalise new ideas constantly and creatively. They have to be imbued with a strong commitment to humane values and to social justice. All this implies better education.

1.15 Besides, a variety of new challenges and social needs make it imperative for the Government to formulate and implement a new Education Policy for the country. Nothing short of this will meet the situation.

PART II

The Essence and Role of Education

- 2.1 In our national perception education is essentially for all. This is fundamental to our all-round development, material and spiritual.
- 2.2 Education has an acculturating role. It refines sensitivities and perceptions that contribute to national cohesion, a scientific temper and independence of mind and spirit—thus furthering the goals of socialism, secularism and democracy enshrined in our Constitution.
- 2.3 Education develops manpower for different levels of the economy. It is also the substrate on which research and development flourish, being the ultimate guarantee of national self-reliance.
- 2.4 In sum, Education is a unique investment in the present and the future. This cardinal principle is the key to the National Policy on Education.

PART III

National System of Education

- 3.1 The Constitution embodies the principles on which the National System of Education is conceived of.
- 3.2 The concept of a National System of Education implies that, up to a given level, all students, irrespective of caste, creed, location or sex, have access to education of a comparable quality. To achieve this, the Government will initiate appropriately funded programmes. Effective measures will be taken in the direction of the Common School System recommended in the 1968 Policy.
- 3.3 The National System of Education envisages a common educational structure. The 10+2+3 structure has now been accepted in all parts of the country. Regarding the further break-up of the first 10 years efforts will be made to move towards an elementary system comprising 5 years of primary education and 3 years of upper primary, followed by 2 years of High School.
- 3.4 The National System of Education will be based on a national curricular framework which contains a common core along with other components that are flexible. The common core will include the history of India's freedom movement, the constitutional obligations and other content essential to nurture national identity. These elements will cut across subject areas and will be designed to promote values such as India's common cultural heritage, egalitarianism, democracy and secularism,

equality of the sexes, protection of the environment, removal of social barriers, observance of the small family norm and inculcation of the scientific temper. All educational programmes will be carried on in strict conformity with secular values.

3.5 India has always worked for peace and understanding between nations, treating the whole world as one family. True to this hoary tradition, Education has to strengthen this world view and motivate the younger generations for international cooperation and peaceful co-existence. This aspect cannot be neglected.

3.6 To promote equality, it will be necessary to provide for equal opportunity to all not only in access, but also in the conditions for success. Besides, awareness of the inherent equality of all will be created through the core curriculum. The purpose is to remove prejudices and complexes transmitted through the social environment and the accident of birth.

3.7 Minimum levels of learning will be laid down for each stage of education. Steps will also be taken to foster among students an understanding of the diverse cultural and social systems of the people living in different parts of the country. Besides the promotion of the link language, programmes will also be launched to increase substantially the translation of books from one language to another and to publish multi-lingual dictionaries and glossaries. The young will be encouraged to undertake the rediscovery of India, each in his own image and perception.

3.8 In higher education in general, and technical education in particular, steps will be taken to facilitate inter-regional mobility by providing equal access to every Indian of requisite merit, regardless of his origins. The universal character of universities and other institutions of higher education is to be underscored.

3.9 In the areas of research and development, and education in science and technology, special measures will be taken to establish network arrangements between different institutions in the country to pool their resources and participate in projects of national importance.

3.10 The Nation as a whole will assume the responsibility of providing resource support for implementing programmes of educational transformation, reducing disparities, universalisation of elementary education, adult literacy, scientific and technological research, etc.

3.11 Life-long education is a cherished goal of the educational process. This presupposes universal literacy. Opportunities will be provided to the youth, housewives, agricultural and industrial workers and professionals to continue the education of their choice, at the pace suited to them. The future thrust will be in the direction of open and distance learning.

3.12 The institutions which will be strengthened to play an important role in giving shape to the National System of Education are the University Grants Commission, the All India Council of Technical Education, the Indian Council of Agricultural Research and the Indian Medical Council. Integrated planning will be instituted among all these bodies so as to establish functional linkages and reinforce programmes of research and

postgraduate education. These, together with the National Council of Educational Research and Training, the National Institute of Educational Planning and Administration and the International Institute of Science and Technology Education will be involved in implementing the Education Policy.

A Meaningful Partnership

3.13 The Constitutional Amendment of 1976, which includes Education in the Concurrent List, was a far-reaching step whose implications—substantive, financial and administrative—require a new sharing of responsibility between the Union Government and the States in respect of this vital area of national life. While the role and responsibility of the States in regard to education will remain essentially unchanged, the Union Government would accept a larger responsibility to reinforce the national and integrative character of education, to maintain quality and standards (including those of the teaching profession at all levels), to study and monitor the educational requirements of the country as a whole in regard to manpower for development, to cater to the needs of research and advanced study, to look after the international aspects of education, culture and Human Resource Development and, in general, to promote excellence at all levels of the educational pyramid throughout the country. Concurrence signifies a partnership which is at once meaningful and challenging; the National Policy will be oriented towards giving effect to it in letter and spirit.

PART IV

Education for Equality

Disparities

4.1 The new Policy will lay special emphasis on the removal of disparities and to equalise educational opportunity by attending to the specific needs of those who have been denied equality so far.

Education for Women's Equality

4.2 Education will be used as an agent of basic change in the status of women. In order to neutralise the accumulated distortions of the past, there will be a well-conceived edge in favour of women. The National Education System will play a positive, interventionist role in the empowerment of women. It will foster the development of new values through redesigned curricula, textbooks, the training and orientation of teachers, decision-makers and administrators, and the active involvement of educational institutions. This will be an act of faith and social engineering. Women's studies will be promoted as a part of various courses and educational institutions encouraged to take up active programmes to further women's development.

4.3 The removal of women's illiteracy and obstacles inhibiting their access to, and retention in, elementary education will receive over-riding priority, through provision of special support services, setting of time targets, and effective monitoring. Major emphasis will be laid on women's participation in vocational, technical and professional education at different levels. The policy of non-discrimination will be pursued vigorously to eliminate sex stereo-typing in vocational and professional courses and to promote women's participation in non-traditional occupations, as well as in existing and emergent technologies.

The Education of Scheduled Castes

4.4 The central focus in the SCs' educational development is their equalisation with the non-SC population at all stages and levels of education, in all areas and in all the four dimensions—rural male, rural female, urban male and urban female.

4.5 The measures contemplated for this purpose include:

- (i) Incentives to indigent families to send their children to school regularly till they reach the age of 14;
- (ii) Pre-matric Scholarship scheme for children of families engaged in occupations such as scavenging, flaying and tanning to be made applicable from Class I onwards. All children of such families, regardless of incomes, will be covered by this scheme and time-bound programmes targetted on them will be undertaken;
- (iii) Constant micro-planning and verification to ensure that the enrolment, retention and successful completion of courses by SC students do not fall at any stage, and provision of remedial courses to improve their prospects for further education and employment.
- (iv) Recruitment of teachers from Scheduled Castes;
- (v) Provision of facilities for SC students in students hostels at district headquarters, according to a phased programme;
- (vi) Location of school buildings, Balwadis and Adult Education Centres in such a way as to facilitate full participation of the Scheduled Castes;
- (vii) The utilization of N.R.E.P. and R.L.E.G.P. resources so as to make substantial educational facilities available to the Scheduled Castes; and
- (viii) Constant innovation in finding new methods to increase the participation of the Scheduled Castes in the educational process.

The Education of Scheduled Tribes

4.6 The following measures will be taken urgently to bring the Scheduled Tribes on par with others:

- (i) Priority will be accorded to opening primary schools in tribal areas. The construction of school buildings will be undertaken in these areas on a priority basis under

the normal funds for education, as well as under the N.R.E.P., R.L.E.G.P, Tribal Welfare schemes, etc.

(ii) The socio-cultural milieu of the STs has its distinctive characteristics including, in many cases, their own spoken languages. This underlines the need to develop the curricula and devise instructional materials in tribal languages at the initial stages, with arrangements for switching over to the regional language.

(iii) Educated and promising Scheduled Tribe youths will be encouraged and trained to take up teaching in tribal areas.

(iv) Residential schools, including Ashram Schools, will be established on a large scale.

(v) Incentive schemes will be formulated for the Scheduled Tribes, keeping in view their special needs and life styles. Scholarships for higher education will emphasise technical, professional and para-professional courses. Special remedial courses and other programmes to remove psycho-social impediments will be provided to improve their performance in various courses.

(vi) Anganwadis, Non-formal and Adult Education Centres will be opened on a priority basis in areas predominantly inhabited by the Scheduled Tribes.

(vii) The curriculum at all stages of education will be designed to create an awareness of the rich cultural identity of the tribal people as also of their enormous creative talent.

Other Educationally Backward Sections and Areas

4.7 Suitable incentives will be provided to all educationally backward sections of society, particularly in the rural areas. Hill and desert districts, remote and inaccessible areas and islands will be provided adequate institutional infra-structure

Minorities

4.8 Some minority groups are educationally deprived or backward. Greater attention will be paid to the education of these groups in the interest of equality and social justice. This will naturally include the Constitutional guarantees given to them to establish and administer their own educational institutions, and protection to their languages and culture. Simultaneously, objectivity will be reflected in the preparation of textbooks and in all school activities and all possible measures will be taken to promote an integration based on appreciation of common national goals and ideals, in conformity with the core curriculum.

The Handicapped

4.9 The objective should be to integrate the physically and mentally handicapped with the general community as equal partners, to prepare them for normal growth and

to enable them to face life with courage and confidence. The following measures will be taken in this regard:

- (i) Wherever it is feasible, the education of children with motor handicaps and other mild handicaps will be common with that of others.
- (ii) Special schools with hostels will be provided, as far as possible at district headquarters, for the severely handicapped children.
- (iii) Adequate arrangements will be made to give vocational training to the disabled.
- (iv) Teachers' training programmes will be reoriented, in particular for teachers of primary classes, to deal with the special difficulties of the handicapped children; and
- (v) Voluntary effort for the education of the disabled, will be encouraged in every possible manner.

Adult Education

4.10 Our ancient scriptures define education as that which liberates—i.e. provides the instruments for liberation from ignorance and oppression. In the modern world, it would naturally include the ability to read and write, since that is the main instrument of learning. Hence the crucial importance of adult education, including adult literacy.

4.11 The critical development issue today is the continuous upgradation of skills so as to produce manpower resources of the kind and the number required by the society. Since participation by beneficiaries in the developmental programmes is of crucial importance, systematic programmes of adult education linked with national goals such as alleviation of poverty, national integration, environmental conservation, energisation of the cultural creativity of the people, observance of small family norm, promotion of women's equality, etc. will be organised and the existing programmes reviewed and strengthened.

4.12 The whole Nation must pledge itself to the eradication of illiteracy, particularly in the 15-35 age group. The Central and State Governments, political parties and their mass organisations, the mass media and educational institutions must commit themselves to mass literacy programmes of diverse nature. It will also have to involve on a large scale teachers, students, youth, voluntary agencies, employers, etc. Concerted efforts will be made to harness various research agencies to improve the pedagogical aspects of adult literacy. The mass literacy programme would include, in addition to literacy, functional knowledge and skills, and also awareness among learners about the socio-economic reality and the possibility to change it.

4.13 A vast programme of adult and continuing education will be implemented through various ways and channels, including—

- (a) establishment of centres in rural areas for continuing education;
- (b) workers's education through the employers, trade unions and concerned agencies of government;

- (c) post-secondary education institutions;
- (d) wider promotion of books, libraries and reading rooms;
- (e) use of radio, TV and films, as mass and group learning media;
- (f) creation of learners' groups and organisations;
- (g) programmes of distance learning;
- (h) organizing assistance in self-learning; and
- (i) organising need and interest based vocational training programmes.

PART V

Reorganisation of Education at Different Stages

Early Childhood Care and Education

5.1 The National Policy on Children specially emphasises investment in the development of the young child, particularly children from sections of the population in which first generation learners predominate.

5.2 Recognising the holistic nature of child development, viz., nutrition, health and social, mental, physical, moral and emotional development. Early Childhood Care and Education (ECCE) will receive high priority and be suitably integrated with the Integrated Child Development Services programme, wherever possible. Day-care centres will be provided as a support service for universalisation of primary education, to enable girls engaged in taking care of siblings to attend schools and as a support service for working women belonging to poorer sections.

5.3 Programmes of ECCE will be child-oriented, focussed around play and the individuality of the child. Formal methods and introduction of the 3 R's will be discouraged at this stage. The local community will be fully involved in these programmes.

5.4 A full integration of child care and pre-primary education will be brought about, both as a feeder and a strengthening factor for primary education and for human resource development in general. In continuation of this stage, the School Health Programme will be strengthened.

Elementary Education

5.5 The new thrust in elementary education will emphasise two aspects: (i) universal enrolment and universal retention of children up to 14 years of age, and (ii) a substantial improvement in the quality of education.

Child-Centred Approach

5.6 A warm, welcoming and encouraging approach, in which all concerned share a

solicitude for the needs of the child, is the best motivation for the child to attend school and learn. A child-centred and activity-based process of learning should be adopted at the primary stage. First generation learners should be allowed to set their own pace and be given supplementary remedial instruction. As the child grows, the component of cognitive learning will be increased and skills organised through practice. The policy of non-detention at the primary stage will be retained, making evaluation as disaggregated as feasible. Corporal punishment will be firmly excluded from the educational system and school timings as well as vacations adjusted to the convenience of children.

School Facilities

5.7 Provision will be made of essential facilities in primary schools, including at least two reasonably large rooms that are usable in all weather, and the necessary toys, blackboards, maps, charts, and other learning material. At least two teachers, one of whom a woman, should work in every school, the number increasing as early as possible to one teacher per class. A phased drive, symbolically called OPERATION BLACKBOARD will be undertaken with immediate effect to improve Primary Schools all over the country. Government, local bodies, voluntary agencies and individuals will be fully involved. Construction of school buildings will be the first charge on NREP and RLEGP funds.

Non-formal Education

5.8 A large and systematic programme of non-formal education will be launched for school drop-outs, for children from habitations without schools, working children and girls who cannot attend whole-day schools.

5.9 Modern technological aids will be used to improve the learning environment of NFE centres. Talented and dedicated young men and women from the local community will be chosen to serve as instructors, and particular attention paid to their training. Steps will be taken to facilitate their entry into the formal system in deserving cases. All necessary measures will be taken to ensure that the quality of non-formal education is comparable with formal education.

5.10 Effective steps will be taken to provide a framework for the curriculum on the lines of the national core curriculum, but based on the needs of the learners and related to the local environment. Learning material of high quality will be developed and provided free of charge to all pupils. NFE programmes will provide participatory learning environment, and activities such as games and sports, cultural programmes, excursions, etc.

5.11 Much of the work of running NFE centres will be done through voluntary agencies and panchayati raj institutions. The provision of funds to these agencies will be adequate and timely. The Government will take over-all responsibility for this vital sector.

A Resolve

5.12 The New Education Policy will give the highest priority to solving the problem of children dropping out of school and will adopt an array of meticulously formulated strategies based on micro-planning, and applied at the grass-roots level all over the country, to ensure children's retention at school. This effort will be fully coordinated with the network of non-formal education. It shall be ensured that all children who attain the age of about 11 years by 1990 will have had five years of schooling, or its equivalent through the non-formal stream. Likewise, by 1995 all children will be provided free and compulsory education upto 14 years of age.

Secondary Education

5.13 Secondary education begins to expose students to the differentiated roles of science, the humanities and social sciences. This is also an appropriate stage to provide children with a sense of history and national perspective and give them opportunities to understand their constitutional duties and rights as citizens. Conscious internalisation of a healthy work ethos and of the values of a humane and composite culture will be brought about through appropriately formulated curricula. Vocationalisation through specialised institutions or through the refashioning of secondary education can, at this stage, provide valuable manpower for economic growth. Access to secondary education will be widened to cover areas unserved by it at present. In other areas, the main emphasis will be on consolidation.

Pace-setting Schools

5.14 It is universally accepted that children with special talent or aptitude should be provided opportunities to proceed at a faster pace, by making good quality education available to them, irrespective of their capacity to pay for it.

5.15 Pace-setting schools intended to serve this purpose will be established in various parts of the country on a given pattern, but with full scope for innovation and experimentation. Their broad aims will be to serve the objective of excellence, coupled with equity and social justice (with reservation for SCs and STs), to promote national integration by providing opportunities to talented children largely rural, from different parts of the country to live and learn together, to develop their full potential, and, most importantly, to become catalysts of a nation-wide programme of school improvement. The schools will be residential and free of charge.

Vocationalisation

5.16 The introduction of systematic, well-planned and rigorously implemented pro-

grammes of vocational education is crucial in the proposed educational reorganisation. These elements are meant to enhance individual employability, to reduce the mis-match between the demand and supply of skilled manpower, and to provide an alternative for those pursuing higher education without particular interest or purpose.

5.17 Vocational education will be a distinct stream, intended to prepare students for identified occupations spanning several areas of activity. These courses will ordinarily be provided after the secondary stage, but keeping the scheme flexible, they may also be made available after Class VIII. In the interests of integrating vocational education better with their facilities the Industrial Training Institutes will also conform to the larger vocational pattern.

5.18 Health planning and health service management should optimally interlock with the education and training of appropriate categories of health manpower through health-related vocational courses. Health education at the primary and middle levels will ensure the commitment of the individual to family and community health, and lead to health-related vocational courses at the +2 stage of higher secondary education. Efforts will be made to devise similar vocational courses based on Agriculture, Marketing, Social Services, etc. An emphasis in vocational education will also be on development of attitudes, knowledge, and skills for entrepreneurship and self-employment.

5.19 The establishment of vocational courses or institutions will be the responsibility of the Government as well as employers in the public and private sectors; the Government will, however, take special steps to cater to the needs of women, rural and tribal students and the deprived sections of society. Appropriate programmes will also be started for the handicapped.

5.20 Graduates of vocational courses will be given opportunities, under predetermined conditions, for professional growth, career improvement and lateral entry into courses of general, technical and professional education through appropriate bridge courses.

5.21 Non-formal, flexible and need-based vocational programmes will also be made available to neoliterates, youth who have completed primary education, school drop-outs, persons engaged in work and unemployed or partially employed persons. Special attention in this regard will be given to women.

5.22 Tertiary level courses will be organised for the young who graduate from the higher secondary courses of the academic stream and may also require vocational courses.

5.23 It is proposed that vocational courses cover 10 per cent of higher secondary students by 1990 and 25 per cent by 1995. Steps will be taken to see that a substantial majority of the products of vocational courses are employed or become self-employed. Review of the courses offered would be regularly undertaken. Government will also review its recruitment policy to encourage diversification at the secondary level.

Higher Education

5.24 Higher education provides people with an opportunity to reflect on the critical social, economic, cultural, moral and spiritual issues facing humanity. It contributes to national development through dissemination of specialized knowledge and skills. It is therefore a crucial factor for survival. Being at the apex of the educational pyramid, it has also a key role in producing teachers for the education system.

5.25 In the context of the unprecedented explosion of knowledge, higher education has to become dynamic as never before, constantly entering uncharted areas.

5.26 There are around 150 universities and about 5,000 colleges in India today. In view of the need to effect an all round improvement in these institutions, it is proposed that, in the near future, the main emphasis will be on the consolidation of, and expansion of facilities in, the existing institutions.

5.27 Urgent steps will be taken to protect the system from degradation.

5.28 In view of mixed experiences with the system of affiliation, autonomous colleges will be helped to develop in large numbers until the affiliating system is replaced by a freer and more creative association of universities with colleges. Similarly, the creation of autonomous departments within universities on a selective basis will be encouraged. Autonomy and freedom will be accompanied by accountability.

5.29 Courses and programmes will be redesigned to meet the demands of specialisation better. Special emphasis will be laid on linguistic competence. There will be increasing flexibility in the combination of courses.

5.30 State level planning and coordination of higher education will be done through Councils of Higher Education. The UGC and these Councils will develop coordinative methods to keep a watch on standards.

5.31 Provision will be made for minimum facilities and admission will be regulated according to capacity. A major effort will be directed towards the transformation of teaching methods. Audio-visual aids and electronic equipment will be introduced; development of science and technology curricula and material, research, and teacher orientation will receive attention. This will require preparation of teachers at the beginning of the service as well as continuing education thereafter. Teachers' performance will be systematically assessed. All posts will be filled on the basis of merit.

5.32 Research in the universities will be provided enhanced support and steps will be taken to ensure its high quality. Suitable mechanisms will be set up by the UGC for coordinating research in the universities, particularly in thrust areas of science and technology, with research undertaken by other agencies. An effort will be made to encourage the setting up of national research facilities within the university system, with proper forms of autonomous management.

5.33 Research in Indology, the humanities and social sciences will receive adequate support. To fulfil the need for the synthesis of knowledge, inter-disciplinary research

will be encouraged. Efforts will be made to delve into India's ancient fund of knowledge and to relate it to contemporary reality. This effort will imply the development of facilities for the intensive study of Sanskrit and other classical languages.

5.34 In the interest of greater coordination and consistency in policy, sharing of facilities and developing inter-disciplinary research, a national body covering higher education in general, agricultural, medical, technical, legal and other professional fields will be set up.

Open University and Distance Learning

5.35 The Open University system has been initiated in order to augment opportunities for higher education and as an instrument of democratising education.

5.36 The Indira Gandhi National Open University, established in 1985 in fulfilment of these objectives, will be strengthened.

5.37 This powerful instrument will have to be developed with care and extended with caution.

Delinking Degrees from Jobs

5.38 A beginning will be made in de-linking degrees from jobs in selected areas.

5.39 The proposal cannot be applied to occupation-specific courses like Engineering, Medicine, Law, Teaching, etc. Similarly, the services of specialists with academic qualifications in the humanities, social sciences, sciences, etc. will continue to be required in various job positions.

5.40 De-linking will be applied in services for which a university degree need not be a necessary qualification. Its implementation will lead to a re-fashioning of job-specific courses and afford greater justice to those candidates who, despite being equipped for a given job, are unable to get it because of an unnecessary preference for graduate candidates.

5.41 Concomitant with de-linking, an appropriate machinery, such as a National Testing Service, will be established, in appropriate phases, to conduct tests on a voluntary basis to determine the suitability of candidates for specified jobs and to pave the way for the emergence of norms of comparable competence across the nation.

Rural University

5.42 The new pattern of the Rural University will be consolidated and developed on the lines of Mahatma Gandhi's revolutionary ideas on education so as to take up the challenges of micro-planning at grassroot levels for the transformation of rural areas. Institutions and programmes of Gandhian basic education will be supported.

PART VI

Technical and Management Education

6.1 Although the two streams of technical and management education are functioning separately, it is essential to look at them together, in view of their close relationship and complementary concerns. The reorganisation of Technical and Management Education should take into account the anticipated scenario by the turn of the century, with specific reference to the likely changes in the economy, social environment, production and management processes, the rapid expansion of knowledge and the great advances in science and technology.

6.2 The infrastructure and services sectors as well as the unorganised rural sector also need a greater induction of improved technologies and a supply of technical and managerial manpower. This will be attended to by the Government.

6.3 In order to improve the situation regarding manpower information, the recently set up Technical Manpower Information System will be further developed and strengthened.

6.4 Continuing education, covering established as well as emerging technologies, will be promoted.

6.5 As computers have become important and ubiquitous tools, a minimal exposure to computers and a training in their use will form part of professional education. Programmes of computer literacy will be organised on wide scale from the school stage.

6.6 In view of the present rigid entry requirements to formal courses restricting the access of a large segment of people to technical and managerial education, programmes through a distance-learning process, including use of the mass media, will be offered. Technical and management education programmes, including education in polytechnics, will also be on a flexible modular pattern based on credits, with provision for multi-point entry. A strong guidance and counselling service will be provided.

6.7 In order to increase the relevance of management education, particularly in the non-corporate and under-managed sectors, the management education system will study and document the Indian experience and create a body of knowledge and specific educational programmes suited to these sectors.

6.8 Appropriate formal and non-formal programmes of technical education will be devised for the benefit of women, the economically and socially weaker sections, and the physically handicapped.

6.9 The emphasis on vocational education and its expansion will need a large number of teachers and professionals in vocational education, educational technology, curriculum development, etc. Programmes will be started to meet this demand.

6.10 To encourage students to consider "self-employment" as a career option, training in entrepreneurship will be provided through modular or optional courses, in degree or diploma programmes.

6.11 In order to meet the continuing needs of updating curriculum, renewal should systematically phase out obsolescence and introduce new technologies or disciplines.

Institutional Thrusts

6.12 Some polytechnics in the rural areas have started training weaker groups in those areas for productive occupations through a system of community polytechnics. The community polytechnic system will be appraised and appropriately strengthened to increase its quality and coverage.

Innovation, Research and Development

6.13 Research as a means of renovation and renewal of educational processes will be undertaken by all higher technical institutions. It will primarily aim at producing quality manpower capable of taking up R&D functions. Research for development will focus on improving present technologies, developing new indigenous ones and enhancing production and productivity. A suitable system for watching and forecasting technology will be set up.

6.14 The scope for cooperation, collaboration and networking relationships between institutions at various levels and with the user systems will be utilised. Proper maintenance, and an attitude of innovation and improvement will be promoted systematically.

Promoting Efficiency and Effectiveness at all Levels

6.15 As technical and management education is expensive, the following major steps will be taken for cost-effectiveness and to promote excellence:

- (i) High priority will be given to modernisation and removal of obsolescence. However, modernisation will be undertaken to enhance functional efficiency and not for its own sake or as a status symbol:
- (ii) Institutions will be encouraged to generate resources using their capacities to provide services to the community and industry. They will be equipped with up-to-date learning resources, library and computer facilities:
- (iii) Adequate hostel accommodation will be provided, specially for girls. Facilities for sports, creative work and cultural activities will be expanded:
- (iv) More effective procedures will be adopted in the recruitment of staff. Career opportunities, service conditions, consultancy norms and other perquisites will be improved.
- (v) Teachers will have multiple roles to perform: teaching, research, development of learning resource material, extension, and managing the institution. Initial and in-service training will be made mandatory for faculty members and adequate training reserves will be provided. Staff Development Programmes will be integrated at the State, and coordinated at Regional and National levels.

- (vi) The curricula of technical and management programmes will be targetted on current as well as the projected needs of industry or user systems. Active interaction between technical or management institutions and industry will be promoted in programme planning and implementation, exchange of personnel, training facilities and resources, research and consultancy and other areas of mutual interest.
- (vii) Excellence in performance of institutions and individuals will be recognised and rewarded. The emergence of substandard institutions will be checked. A climate conducive to excellence and innovation will be promoted with full involvement of the faculty.
- (viii) Select institutions will be awarded academic, administrative and financial autonomy of varying degrees, building in safeguards with respect to accountability.
- (ix) Networking systems will have to be established between technical education and industry, R&D organisations, programmes of rural and community development, and with other sectors of education with complementary characteristics.

Management Functions and Change

6.16 In view of the likely emergence of changes in management systems and the need to equip students with the ability to cope with them, effective mechanisms will be devised to understand the nature and direction of change per se and to develop the important skill of managing change.

6.17 In view of the integrated nature of the task, the Ministry of Human Resource Development will coordinate the balanced development of engineering, vocational and management education as well as the education of technicians and craftsmen.

6.18 Professional societies will be encouraged and enabled to perform their due role in the advancement of technical and management education.

6.19 The All India Council for Technical Education will be vested with statutory authority for planning, formulation and the maintenance of norms and standards, accreditation, funding of priority areas, monitoring and evaluation, maintaining parity of certification and awards and ensuring the coordinated and integrated development of technical and management education. Mandatory periodic evaluation will be carried out by a duly constituted Accreditation Board.

6.20 In the interests of maintaining standards and for several other valid reasons, the commercialisation of technical and professional education will be curbed. An alternative system will be devised to involve private and voluntary effort in this sector of education, in conformity with accepted norms and goals.

PART VII

Making the System Work

7.1 It is obvious that these and many other new tasks of education cannot be performed in a state of disorder. Education needs to be managed in an atmosphere of utmost intellectual rigour, seriousness of purpose and, at the same time, of freedom essential for innovation and creativity. While far-reaching changes will have to be incorporated in the quality and range of education, the process of introducing discipline into the system will have to be started, here and now, in what exists.

7.2 The country has placed boundless trust in the educational system. The people have a right to expect concrete results. The first task is to make it work. All teachers should teach and all students study.

7.3 The strategy in this behalf will consist of —

- (a) a better deal to teachers with greater accountability;
- (b) provision of improved students' services and insistence on observance of acceptable norms of behaviour;
- (c) provision of better facilities to institutions; and
- (d) creation of a system of performance appraisals of institutions according to standards and norms set at the National or State levels.

PART VIII

Reorienting the Content and Process of Education

The Cultural Perspective

8.1 The existing schism between the formal system of education and the country's rich and varied cultural traditions needs to be bridged. The preoccupation with modern technologies cannot be allowed to sever our new generations from the roots in India's history and culture. De-culturation, de-humanisation and alienation must be avoided at all costs. Education can and must bring about the fine synthesis between change-oriented technologies and the country's continuity of cultural tradition.

8.2 The curricula and processes of education will be enriched by cultural content in as many manifestations as possible. Children will be enabled to develop sensitivity to beauty, harmony and refinement. Resource persons in the community, irrespective of their formal educational qualifications, will be invited to contribute to the cultural enrichment of education, employing both the literate and oral traditions of communi-

cation. To sustain and carry forward the cultural tradition, the role of old masters, who train pupils through traditional modes will be supported and recognised.

8.3 Linkages will be established between the university system and institutions of higher learning in art, archaeology, oriental studies etc. Due attention will also be paid to the specialised disciplines of Fine Arts, Museology, Folklore etc. Teaching, training and research in these disciplines will be strengthened so as to replenish specialised manpower in them.

Value Education

8.4 The growing concern over the erosion of essential values and an increasing cynicism in society has brought to focus the need for readjustments in the curriculum in order to make education a forceful tool for the cultivation of social and moral values.

8.5 In our culturally plural society, education should foster universal and eternal values, oriented towards the unity and integration of our people. Such value education should help eliminate obscurantism, religious fanaticism, violence, superstition and fatalism.

8.6 Apart from this combative role, value education has a profound positive content, based on our heritage, national goals universal perceptions. It should lay primary emphasis on this aspect.

Languages

8.7 The Education Policy of 1968 had examined the question of the development of languages in great detail; its essential provisions can hardly be improved upon and are as relevant today as before. The implementation of this part of the 1968 Policy has, however, been uneven. The Policy will be implemented more energetically and purposefully.

Books and Libraries

8.8 The availability of books at low prices is indispensable for people's education. Effort will be made to secure easy accessibility to books for all segments of the population. Measures will be taken to improve the quality of books, promote the reading habit and encourage creative writing. Authors' interests will be protected. Good translations of foreign books into Indian languages will be supported. Special attention will be paid to the production of quality books for children, including textbooks and workbooks.

8.9 Together with the development of books, a nation-wide movement for the improvement of existing libraries and the establishment of new ones will be taken up. Provision will be made in all educational institutions for library facilities and the status of librarians improved.

Media and Educational Technology

8.10 Modern communication technologies have the potential to bypass several stages and sequences in the process of development encountered in earlier decades. Both the constraints of time and distance at once become manageable. In order to avoid structural dualism, modern educational technology must reach out to the most distant areas and the most deprived sections of beneficiaries simultaneously with the areas of comparative affluence and ready availability.

8.11 Educational technology will be employed in the spread of useful information, the training and re-training of teachers, to improve quality, sharpen awareness of art and culture, inculcate abiding values, etc., both in the formal and non-formal sectors. Maximum use will be made of the available infrastructure. In villages without electricity, batteries or solar packs will be used to run the programme.

8.12 The generation of relevant and culturally compatible educational programmes will form an important component of educational technology, and all available resources in the country will be utilised for this purpose.

8.13 The media have a profound influence on the minds of children as well as adults; some of them tend to encourage consumerism, violence etc. and have a deleterious effect. Radio and TV programmes which clearly militate against proper educational objectives will be prevented. Steps will be taken to discourage such trends in films and other media also. An active movement will be started to promote the production of children's films of high quality and usefulness.

Work Experience

8.14 Work experience, viewed as purposive and meaningful manual work, organised as an integral part of the learning process and resulting in either goods or services useful to the community, is considered as an essential component at all stages of education, to be provided through well-structured and graded programmes. It would comprise activities in accord with the interests, abilities and needs of students, the level of skills and knowledge to be upgraded with the stages of education. This experience would be helpful on his entry into the workforce. Pre-vocational programmes provided at the lower secondary stage will also facilitate the choice of the vocational courses at the higher secondary stage.

Education and Environment

8.15 There is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process.

Mathematics Teaching

8.16 Mathematics should be visualised as the vehicle to train a child to think, reason,

analyse and to articulate logically. Apart from being a specific subject, it should be treated as a concomitant to any subject involving analysis and reasoning.

8.17 With the recent introduction of computers in schools, educational computing and the emergence of learning through the understanding of cause-effect relationships and the interplay of variables, the teaching of mathematics will be suitably redesigned to bring it in line with modern technological devices.

Science Education

8.18 Science education will be strengthened so as to develop in the child well defined abilities and values such as the spirit of inquiry, creativity, objectivity, the courage to question and an aesthetic sensibility.

8.19 Science education programmes will be designed to enable the learner to acquire problem solving and decision making skills and to discover the relationship of science with health, agriculture, industry and other aspects of daily life. Every effort will be made to extend science education to the vast numbers who have remained outside the pale of formal education.

Sports and Physical Education

8.20 Sports and physical education are an integral part of the learning process, and will be included in the evaluation of performance. A nation-wide infrastructure for physical education, sports and games will be built into the educational edifice.

8.21 The infrastructure will consist of playfields, equipment, coaches and teachers of physical education as part of the School Improvement Programme. Available open spaces in urban areas will be reserved for playgrounds, if necessary by legislation. Efforts will be made to establish sports institutions and hostels where specialised attention will be given to sports activities and sports-related studies, along with normal education. Appropriate encouragement will be given to those talented in sports and games. Due stress will be laid on indigenous traditional games. As a system which promotes an integrated development of body and mind, Yoga will receive special attention. Efforts will be made to introduce yoga in all schools; to this end, it will be introduced in teacher training courses.

The Role of Youth

8.22 Opportunities will be provided for the youth to involve themselves in national and social development through educational institutions and outside them. Students will be required to participate in one or the other of existing schemes, namely, the National Service Scheme, National Cadet Corps, etc. Outside the institutions, the youth will be encouraged to take up programmes of development, reform and extension. The National Service Volunteer Scheme will be strengthened.

The Evaluation Process and Examination Reform

8.23 Assessment of performance is an integral part of any process of learning and teaching. As part of sound educational strategy, examinations should be employed to bring about qualitative improvements in education.

8.24 The objective will be to re-cast the examination system so as to ensure a method of assessment that is a valid and reliable measure of student development and a powerful instrument for improving teaching and learning. In functional terms, this would mean:

- (i) The elimination of excessive element of chance and subjectivity;
- (ii) The de-emphasis of memorisation;
- (iii) Continuous and comprehensive evaluation that incorporates both scholastic and non-scholastic aspects of education, spread over the total span of instructional time;
- (iv) Effective use of the evaluation process by teachers, students and parents
- (v) Improvement in the conduct of examinations;
- (vi) The introduction of concomitant changes in instructional materials and methodology;
- (vii) Introduction of the semester system from the secondary stage in a phased manner; and
- (viii) The use of grades in place of marks.

8.25 The above goals are relevant both for external examinations and evaluation within educational institutions. Evaluation at the institutional level will be streamlined and the predominance of external examinations reduced.

PART IX

The Teacher

9.1 The status of the teacher reflects the socio-culture ethos of a society; it is said that no people can rise above the level of its teachers. The Government and the community should endeavour to create conditions which will help motivate and inspire teachers on constructive and creative lines. Teachers should have the freedom to innovate, to devise appropriate methods of communication and activities relevant to the needs and capabilities of and the concerns of the community.

9.2 The methods of recruiting teachers will be reorganised to ensure merit, objectivity and conformity with spatial and functional requirements. The pay and service conditions of teachers have to be commensurate with their social and professional responsibilities and with the need to attract talent to the profession. Efforts will be made to reach the desirable objective of uniform emoluments, service conditions and grievance-remo-

val mechanisms for teachers throughout the country. Guidelines will be formulated to ensure objectivity in the postings and transfers of teachers. A system of teacher evaluation—open, participative and data-based—will be created and reasonable opportunities of promotion to higher grades provided. Norms of accountability will be laid down with incentives for good performance and disincentives for non-performance. Teachers will continue to play a crucial role in the formulation and implementation of educational programmes.

9.3 Teachers' associations must play a significant role in upholding professional integrity, enhancing the dignity of the teacher and in curbing professional misconduct. National level associations of teachers, could prepare a Code of Professional Ethics for Teachers and see to its observance.

Teacher Education

9.4 Teacher education is a continuous process, and its pre-service and in-service components are inseparable. As the first step, the system of teacher education will be overhauled.

9.5 The new programmes of teacher-education will emphasise continuing education and the need for teachers to meet the thrusts envisaged in this Policy.

9.6 District Institutes of Education and Training (DIET) will be established with the capability to organise pre-service and in-service courses for elementary school teachers and for the personnel working in non-formal and adult education. As DIETs get established, sub-standard institutions will be phased out. Selected Secondary Teacher Training Colleges will be upgraded to complement the work of State Councils of Educational Research and Training. The National Council of Teacher Education will be provided the necessary resources and capability to accredit institutions of teacher-education and provide guidance regarding curricula and methods. Networking arrangements will be created between institutions of teacher education and university departments of education.

PART X

The Management of Education

10.1 An overhaul of the system of planning and the management of education will receive high priority. The guiding considerations will be:—

- (a) Evolving a long-term planning and management perspective of education and its integration with the country's developmental and manpower needs;
- (b) Decentralisation and the creation of a spirit of autonomy for educational institutions;

- (c) Giving pre-eminence to people's involvement, including association of non-governmental agencies and voluntary effort;
- (d) Inducting more women in the planning and management of education;
- (e) Establishing the principle of accountability in relation to given objectives and norms.

National Level

10.2 The Central Advisory Board of Education will play a pivotal role in reviewing educational development, determining the changes required to improve the system and monitoring implementation. It will function through appropriate committees and other mechanisms created to ensure contact with, and coordination among, the various areas of Human Resource Development. The Departments of Education at the Centre and in the States will be strengthened through the involvement of professionals.

Indian Education Service

10.3 A proper management structure in education will entail the establishment of the Indian Education Service as an All-India Service. It will bring a national perspective to this vital sector. The basic principles, functions and procedures of recruitment to this service will be decided in consultation with the State Governments.

State Level

10.4 State Governments may establish State Advisory Boards of Education on the lines of CABE. Effective measures should be taken to integrate mechanisms in the various State departments concerned with Human Resource Development.

10.5 Special attention will be paid to the training of educational planners, administrators and heads of institutions. Institutional arrangements for this purpose should be set up in stages.

District and Local Level

10.6 District Boards of Education will be created to manage education up to the higher secondary level. State Governments will attend to this aspect with all possible expedition. Within a multi-level framework of educational development, Central, State, District and Local level agencies will participate in planning, coordination, monitoring and evaluation.

10.7 A very important role must be assigned to the head of an educational institution. Heads will be specially selected and trained. School complexes will be promoted on a flexible pattern so as to serve as networks of institutions and synergic alliances to encourage professionalism among teachers, to ensure observance of norms of conduct and to enable the sharing of experiences and facilities. It is expected that a developed

system of school complexes will take over much of the inspection functions in due course.

10.8 Local communities, through appropriate bodies, will be assigned a major role in programmes of school improvement.

Voluntary Agencies and Aided Institutions

10.9 Non-government and voluntary effort including social activist groups will be encouraged, subject to proper management, and financial assistance provided. At the same time, steps will be taken to prevent the establishment of institutions set up to commercialise education.

PART XI

Resources and Review

11.1 The Education Commission of 1964-66, the National Education Policy of 1968 and practically all others concerned with education have stressed that the egalitarian goals and the practical, development-oriented objectives of Indian society can be realised only by making investments in education of an order commensurate with the nature and dimensions of the task.

11.2 Resources, to the extent possible, will be raised by mobilising donations, asking the beneficiary communities to maintain school buildings and supplies of some consumables, raising fees at the higher levels of education and effecting some savings by the efficient use of facilities. Institutions involved with research and the development of technical and scientific manpower should also mobilize some funds by levying a cess or charge on the user agencies, including Government departments, and entrepreneurs. All these measures will be taken not only to reduce the burden on State resources but also for creating a greater sense of responsibility within the educational system. However, such measures will contribute only marginally to the total funding. The Government and the community in general will find funds for such programmes as: the universalisation of elementary education; liquidating illiteracy; equality of access to educational opportunities to all sections throughout the country; enhancing the social relevance, quality and functional effectiveness of educational programmes; generating knowledge and developing technologies in scientific fields crucial to self-sustaining economic development; and creating a critical consciousness of the values and imperatives of national survival.

11.3 The deleterious consequences of non-investment or inadequate investment in education are indeed very serious. Similarly, the cost of neglecting vocational and

technical education and of research is also unacceptable. Sub-optimal performance in these fields could cause irreparable damage to the Indian economy. The network of insitutions set up from time to time since Independence to fecilitate the application of science and technology would need to be substantially and expeditiously updated, since they are fast becoming obsolete.

11.4 In view of these imperatives, education will be treated as a crucial area of investment for national development and survival. The National Policy on Education, 1968, had laid down that the investment on education be gradually increased to reach a level of expenditure of 6 per cent of the national income as early as possible. Since the actual level of investment has remained far short of that target, it is important that greater determination be shown now to find the funds for the programmes laid down in this policy. While the actual requirements will be computed from time to time on the basis of monitoring and review, the outlay on education will be shaped up to the extent essential for policy implementation in the Seventh plan. It will be ensured that from the Eighth Five Year Plan onwards it will uniformly exceed to 6 per cent of the National income.

Review

11.5 The implementation of the various parameters of the New Policy must be reviewed every five years. Appraisals at short intervals will also be made to ascertain the progress of implementation and the trends emerging from time to time.

PART XII

The Future

12.1 The future shape of education in India is too complex to envision with precision. Yet, given our tradition which has almost always put a high premium on intellectual and spiritual attainment, we are bound to succeed in achieving our objectives.

12.2 The main task is to strengthen the base of the pyramid, which might come close to a billion prople at the turn of the century. Equally, it is important to ensure that those at the top of the pyramid are among the best in the world. Our cultural well-springs had taken good care of both ends in the past; the skew set in with foreign domination and influence. It should now be possible to further intensify the nation-wide effort in Human Resource Development, with Education playing its multi-faceted role.

**PROGRAMME OF MASS ORIENTATION FOR SCHOOL
TEACHERS 1988
INSERVICE TEACHER EDUCATION PACKAGE
Vol I— for Primary School Teachers**

List of NCERT faculty members associated with the revision/rewriting of the modules

Module No.	Title of the Module	Module Developed By
1. C.	National Policy on Education— Implications for Teachers	Prof. S.D. Roka, DPSEE
2. C.	National Curriculum Framework for Elementary and Secondary Education—An Introduction	Dr. G.L. Arora, DESSH
3. C.	Equal Opportunity of Education for Deprived Groups (Scheduled Castes and Scheduled Tribes)	Dr. B. R. Goyal, DTESEES
4. C.	Providing Equal Opportunity of Education to Women	Dr. (Miss) Indira Kulshrestha, WSU
5. C.	Meeting Educational Needs of Children with Learning Problems	Prof. N.K. Jangira, DTESEES
6. C.	Learner-Centred Approach	Prof. Kuldeep Kumar, DEPCG
7. C.	Training Pupils in Developing Inquiry Skills	Prof. N.K. Jangira, DTESEES
8. C.	Value-Oriented Education	Prof. C. Seshadri, RCE, Mysore
9. C.	Our National Symbols	Prof. D.S. Muley, DESSH
10. C.	Promotion of National Integration	Prof. S.H. Khan, DPSEE
11. C.	Education for International Understanding and Human Rights	Prof. D.S. Muley, DESSH
12. C.	Facilitating Enrolment and Retention	Prof. S.D. Roka, DPSEE
13. C.	Institutional Planning and Management	NIEPA

14. C.	Community Participation for Educational Development	NIEPA
15. C.	School Complex	NIEPA
16. C.	Operation Blackboard	Dr. (Mrs) Daljit Gupta, DPSEE
17. C.	Improvising Teaching Aids	Prof. T.R. Bawa, CIET
18. C.	Use of Mass Media and Educational Technology in Education	Dr. Jagdish Singh, CIET
19. P.	Needs and Problems of Children	Prof. (Mrs) R. Murlidharan, DPSEE
20. P.	Continuous Comprehensive Evaluation at Primary Level	Prof. H.S. Srivastava, DMESDP
21. P.	Population Education at Primary Level	Dr. J.L. Pandey, DESSH & Mrs. Saroj Yadav, DESSH
22. P.	Art Education at Primary Level	Shri D. Bakshi & Shri J.D. Virmani, DESSH
23. P.	Work-Experience at Primary level	Dr. Manjit Sen Gupta, DVE
24. P.	Teaching of Mother Tongue (Hindi) at Primary Level	Dr. (Mrs) S. Ludhra, DESSH
25. P.	Teaching of Environmental Studies-I & II at Primary Level	Prof. S.H. Khan, DPSEE
26. P.	Multiple Class Teaching at Primary Level	Dr. B.R. Goyal, DTESEES
27. P.	Teaching of Mathematics at Primary Level	Dr. V.P. Gupta, DPSEE
28. P.	Teaching and Learning of Languages at Primary Level	Dr. (Mrs) T.C. Daswani, DTESEES
29. P.	Health and Physical Education at Primary Level	Shri P.A. Char (Retd.), RCE, Mysore

Abbreviation: C-Common, P-Primary